

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of : O'Brien, Timothy J. et al.
Serial No. : Unassigned
Filing Date : September 27, 2001
For : **REPEAT SEQUENCES OF THE CA125 GENE AND THEIR USE
FOR DIAGNOSTIC AND THERAPEUTIC INTERVENTIONS**
Examiner : Unassigned
Group Art Unit : Unassigned

**TRANSMITTAL OF VERIFIED STATEMENT
FOR THE NUCLEOTIDE SEQUENCE AND/OR AMINO
ACID SEQUENCE DISCLOSURES AS REQUIRED BY 37 C.F.R. § 1.821(e)**

Assistant Commissioner for Patents
Washington, DC 20231

Sir:

Transmitted herewith is an original Sequence Listing which comprises nucleotide and amino acid sequences contained in the application as filed. Applicants include a paper copy of the Sequence Listing as well as a diskette which contains the computer readable form of the Sequence Listing. Pursuant to 37 C.F.R. § 1.821(e), the paper copy and computer readable form, are the same.

Respectfully submitted,

Date: September 27, 2001

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Attorney Docket No.: 40715-260477
40715-260477
WINLIB01:909736.1

<110> O'Brien, Timothy

<120> Repeat Sequences of the CA125 Gene and Their Use for Diagnostic and Therapeutic Interventions

<130> 40715-258841

<150> US 60/284,175

<151> 2001-04-17

<160> 306

<170> PatentIn version 3.0

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35 40 45

Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
50 55 60

Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ala Leu Asp
65 70 75 80

Asn Asp Ser Leu Phe Val Asn Gly Phe Thr His Arg Ser Ser Val Ser
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Thr Thr Ser Thr Pro Gly Thr Pro Thr Val Tyr Leu Gly Ala Ser Lys
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20 25 30

Lys Asp Gly Ala Ala Thr Arg Ala Asp Ala Val Cys Thr His Arg Pro

35 40 45

Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu
50 55 60

Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp
65 70 75 80

Arg His Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser Ser Met Thr
85 90 95

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20 25 30

Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Ile His Arg Leu
35 40 45

Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu
50 55 60

Ser Lys Leu Thr Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr Leu Asp
65 70 75 80

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser Ser Val Ser
85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly
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35 40 45

Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu
50 55 60

Ser Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp
65 70 75 80

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Ala
85 90 95

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20 25 30

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35 40 45

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
50 55 60

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Thr Leu Asp
65 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro
85 90 95

Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly
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Pro Phe Thr
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 35 40 45
 Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
 50 55 60
 Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp
 65 70 75 80
 Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro
 85 90 95
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 Pro Phe
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 Lys Asp Lys Ala Ala Thr Arg Val Asp Ala Ile Cys Thr His His Pro
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Lys	Asp	Ser	Ser	Ala	Met	Ala	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Pro
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Asp	Pro	Glu	Asp	Leu	Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr	Trp	Glu	Leu
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Ser	Asn	Leu	Thr	Asn	Gly	Ile	Gln	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp
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Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp

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Ile Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu						
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Thr Pro Ser Ser Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Ile						
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Gln Gly Leu Leu Gly Pro Leu Phe Lys Asn Ser Ser Val Gly Pro Leu						
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Tyr Ser Gly Cys Arg Leu Ile Ser Leu Arg Ser Glu Lys Asp Gly Ala						
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Ala Thr Gly Val Asp Ala Ile Cys Thr His His Leu Asn Pro Gln Ser						
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Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Gln Leu Ser Gln Met Thr						
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Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu						
	225			230		235
Tyr Val Asn Gly Phe Thr His Arg Ser Ser Gly Leu Thr Thr Ser Thr						
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 Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
 20 25 30
 Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu
 35 40 45
 Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
 50 55 60
 Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp
 65 70 75 80
 Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro
 85 90 95
 Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Phe Gly
 100 105 110
 Thr Pro Ala Ser Leu His Gly His Thr Ala Pro Gly Pro Val Leu Val
 115 120 125
 Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp
 130 135 140
 Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
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 Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu
 165 170 175
 Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala
 180 185 190
 Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn
 195 200 205
 Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr
 210 215 220
 Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp Arg Gly Ser Leu
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 Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro Ile Thr Ser Thr
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<213> Homo sapiens

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Ser 65	Gln	Leu	Thr	Asn 70	Ser	Val	Thr	Glu	Leu	Gly 75	Pro	Tyr	Thr	Leu	Asp 80
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Pro	Gly	Leu	Asp	Arg	Glu	Gln 215	Leu	Tyr	Trp	Glu	Leu 220	Ser	Lys	Leu	Thr
Arg 225	Gly	Ile	Ile	Glu	Leu 230	Gly	Pro	Tyr	Leu	Leu 235	Asp	Arg	Gly	Ser	Leu 240
Tyr	Val	Asn	Gly	Phe 245	Thr	His	Arg	Asn	Phe 250	Val	Pro	Ile	Thr 255	Ser	Thr
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35 40 45

Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu
50 55 60

Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp
65 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Trp Ser Ser Val Pro
85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly
100 105 110

Thr Pro Ser Ser Leu Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile
115 120 125

Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	His	Tyr	Glu	Glu	Asn
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Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu
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Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys His Gly Ala
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Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser
195 200 205

Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr
210 215 220

Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu
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Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg

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Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr
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Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala
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Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser
195 200 205

Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr
210 215 220

Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu
225 230 235 240

Tyr Val Asn Gly Phe Thr His Gln Ser Ser Val Ser Thr Thr Ser Thr
245 250 255

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35 40 45

Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Cys Glu Leu
50 55 60

Ser Gln Leu Thr His Asp Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp
65 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro
85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly
100 105 110

Thr Pro Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile
115 120 125

Pro Phe Thr Phe Asn Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn
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Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu

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Pro	Gly 210	Leu	Asp	Arg	Glu	Arg 215	Leu	Tyr	Trp	Glu	Leu 220	Ser	Gln	Leu	Thr	
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Ser 65	Gln	Leu	Thr	His	Asn 70	Ile	Thr	Glu	Leu	Gly 75	Pro	Tyr	Ser	Leu	Asp 80	
Arg	Asp	Ser	Leu	Tyr 85	Val	Asn	Gly	Phe	Thr 90	His	Gln	Asn	Ser	Val 95	Pro	
Thr	Thr	Ser	Thr 100	Pro	Gly	Thr	Ser	Thr 105	Val	Tyr	Trp	Ala	Thr 110	Thr	Gly	

Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp
65 70 75 80

Arg His Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser Ser Met Thr
 85 90 95
 Thr Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg
 100 105 110
 Thr Pro Ala Ser Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Val
 115 120 125
 Leu Phe Thr Ile Asn Phe Thr Ile Thr Asn Gln Arg Tyr Glu Glu Asn
 130 135 140
 Met His His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
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 Gln Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu
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 Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala
 180 185 190
 Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser
 195 200 205
 Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr
 210 215 220
 His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Gln Asp Arg Asp Ser Leu
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 Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu

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Ser 65	Lys	Leu	Thr	Arg	Gly 70	Ile	Ile	Glu	Leu	Gly 75	Pro	Tyr	Leu	Leu	Asp 80
Arg	Gly	Ser	Leu	Tyr 85	Val	Asn	Gly	Phe	Thr 90	His	Arg	Asn	Phe	Val 95	Pro
Ile	Thr	Ser	Thr 100	Pro	Gly	Thr	Ser	Thr 105	Val	His	Leu	Gly	Thr 110	Ser	Glu
Thr	Pro	Ser 115	Ser	Leu	Pro	Arg	Pro 120	Ile	Val	Pro	Gly	Pro 125	Leu	Leu	Val
Pro	Phe 130	Thr	Leu	Asn	Phe	Thr 135	Ile	Thr	Asn	Leu	Gln 140	Tyr	Glu	Glu	Ala
Met 145	Arg	His	Pro	Gly	Ser 150	Arg	Lys	Phe	Asn	Thr 155	Thr	Glu	Arg	Val	Leu 160
Gln	Gly	Leu	Leu	Arg 165	Pro	Leu	Phe	Lys	Asn	Thr 170	Ser	Val	Ser	Ser 175	Leu
Tyr	Ser	Gly	Cys 180	Arg	Leu	Thr	Leu	Leu 185	Arg	Pro	Glu	Lys	Asp 190	Gly	Ala
Ala	Thr	Arg 195	Val	Asp	Ala	Ala	Cys 200	Thr	Tyr	Arg	Pro	Asp 205	Pro	Lys	Ser
Pro	Gly 210	Leu	Asp	Arg	Glu	Gln 215	Leu	Tyr	Trp	Glu	Leu 220	Ser	Gln	Leu	Thr
His 225	Ser	Ile	Thr	Glu	Leu 230	Gly	Pro	Tyr	Thr	Leu 235	Asp	Arg	Val	Ser	Leu 240
Tyr	Val	Asn	Gly	Phe 245	Asn	Pro	Arg	Ser	Ser 250	Val	Pro	Thr	Thr	Ser 255	Thr
Pro	Gly	Thr	Ser 260	Thr	Val	His	Leu	Ala 265	Thr	Ser	Gly	Thr	Pro 270	Ser	Ser
Leu	Pro	Gly 275	His	Thr	Ala	Pro	Val 280	Pro	Leu	Leu	Ile	Pro 285	Phe	Thr	Leu
Asn 290	Phe	Thr	Ile	Thr	Asn	Leu 295	Gln	Tyr	Glu	Glu	Asp 300	Met	Arg	His	Pro
Gly 305	Ser	Arg	Lys	Phe	Asn 310	Thr	Met	Glu	Arg	Val	Leu 315	Gln	Gly	Leu	Leu 320
Arg	Pro	Leu	Phe	Lys 325	Asn	Thr	Ser	Ile	Gly 330	Pro	Leu	Tyr	Ser	Ser 335	Cys
Arg	Leu	Thr	Leu 340	Leu	Arg	Pro	Glu	Lys 345	Asp	Lys	Ala	Ala	Thr 350	Arg	Val

Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Thr Glu Arg Val Leu
 145 150 155 160
 Gln Gly Leu Leu Asn Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu
 165 170 175
 Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala
 180 185 190
 Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg
 195 200 205
 Pro Gly Leu Asp Arg Glu Gln Leu Tyr Cys Glu Leu Ser Gln Leu Thr
 210 215 220
 His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu
 225 230 235 240
 Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr
 245 250 255
 Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser
 260 265 270
 Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu
 275 280 285
 Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr
 290 295 300
 Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu
 305 310 315 320
 Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys
 325 330 335
 Arg Leu Thr Leu Leu Arg Pro Glu Lys His Gly Ala Ala Thr Gly Val
 340 345 350
 Asp Ala Ile Cys Thr Leu Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp
 355 360 365
 Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser Val Thr
 370 375 380
 Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly
 385 390 395 400
 Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Ser
 405 410 415
 Ala Val His Leu Glu Thr Ser Gly Thr Pro Ala Ser Leu Pro Gly His
 420 425 430
 Thr Ala Pro Gly Pro Leu Leu
 435

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 102250

65		70		75		80									
Asp	Leu	Arg	Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu	Ser	Ser	Pro	Thr	Ile
				85				90						95	
Met	Ala	Ala	Gly	Pro	Leu	Leu	Ile	Pro	Phe	Thr	Ile	Asn	Phe	Thr	Ile
			100					105					110		
Thr	Asn	Leu	Arg	Tyr	Glu	Glu	Asn	Met	His	His	Pro	Gly	Ser	Arg	Lys
		115					120					125			
Phe	Asn	Thr	Met	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Met	Pro	Leu	Phe
	130					135					140				
Lys	Asn	Thr	Ser	Val	Ser	Ser	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu
145					150					155					160
Leu	Arg	Pro	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Arg	Val	Asp	Ala	Val	Cys
				165					170					175	
Thr	His	Arg	Pro	Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asp	Arg	Glu	Arg	Leu
			180					185					190		
Tyr	Trp	Lys	Leu	Ser	Gln	Leu	Thr	His	Gly	Ile	Thr	Glu	Leu	Gly	Pro
		195					200					205			
Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg
	210					215					220				
Ser	Ser	Met	Pro	Thr	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Val
225					230					235					240
Gly	Thr	Ser	Gly	Thr	Pro	Ser	Ser	Ser	Pro	Ser	Pro	Thr	Thr	Ala	Gly
				245					250					255	
Pro	Leu	Leu	Met	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln
		260						265					270		
Tyr	Glu	Glu	Asp	Met	Arg	Arg	Thr	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Met
	275						280					285			
Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Ser	Thr	Ser
	290					295					300				
Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu
305					310					315					320
Lys	His	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	Leu	Arg	Leu
			325						330					335	
Asp	Pro	Thr	Gly	Pro	Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr	Trp	Glu	Leu
			340					345					350		
Ser	Gln	Leu	Thr	Asn	Ser	Val	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp
		355					360					365			
Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Val	Pro
	370					375					380				

0955738 0934

Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu Asp Pro Ser Glu
195 200 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr
210 215 220

Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu
225 230 235 240

Tyr Val Asn Gly Phe Thr His Ser Gly Val Leu Cys Pro Pro Pro Ser
245 250 255

Ile Leu Gly Ile Phe Thr Val Gln Pro Glu Thr Phe Glu Thr Pro Ser
260 265 270

Ser Leu Pro Gly Pro Thr Ala Thr Gly Pro Val Leu Leu Pro Phe Thr
275 280 285

Leu Asn Phe Thr Ile Ile Asn Leu Gln Tyr Glu Glu Asp Met His Arg
290 295 300

Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
305 310 315 320

Leu Met Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly
325 330 335

Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Gln Glu Ala Ala Thr Gly
340 345 350

Val Asp Thr Ile Cys Thr His Arg Val Asp Pro Ile Gly Pro Gly Leu
355 360 365

Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile
370 375 380

Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn
385 390 395 400

Gly Phe Asn Pro Trp Ser Ser Val Pro Thr Thr Ser Thr Pro Gly Thr
405 410 415

Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser Leu Pro Gly
420 425 430

His Thr Ala Pro Val Pro Leu Leu Ile Pro Phe
435 440

<210> 43

<211> 442

<212> PRT

<213> Homo sapiens

<400> 43

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser

00055730-002704

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Leu	Glu	Tyr	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Ala	Ser	Leu	Arg	Pro	Glu	
			20				25						30			
Lys	Asp	Ser	Ser	Ala	Met	Ala	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Pro	
			35				40						45			
Asp	Pro	Glu	Asp	Leu	Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr	Trp	Glu	Leu	
			50				55						60			
Ser	Asn	Leu	Thr	Asn	Gly	Ile	Gln	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	
			65				70						75	80		
Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Met	Pro	
			85				90						95			
Thr	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Val	Gly	Thr	Ser	Gly	
			100				105						110			
Thr	Pro	Ser	Ser	Ser	Pro	Ser	Pro	Thr	Thr	Ala	Gly	Pro	Leu	Leu	Met	
			115				120						125			
Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp	
			130				135						140			
Met	Arg	Arg	Thr	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Met	Glu	Ser	Val	Leu	
			145				150						155	160		
Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro	Leu	
			165				170						175			
Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Lys	Lys	Asp	Gly	Ala	
			180				185						190			
Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Leu	Asp	Pro	Lys	Ser	
			195				200						205			
Pro	Gly	Leu	Asn	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Lys	Leu	Thr	
			210				215						220			
Asn	Asp	Ile	Glu	Glu	Val	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	
			225				230						235	240		
Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Phe	Val	Ala	Pro	Thr	Ser	Thr	
			245				250						255			
Leu	Gly	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Ser	Ser	
			260				265						270			
Leu	Pro	Ser	Pro	Thr	Thr	Gly	Val	Pro	Leu	Leu	Ile	Pro	Phe	Thr	Leu	
			275				280						285			
Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asn	Met	Gly	His	Pro	
			290				295						300			
Gly	Ser	Arg	Lys	Phe	Asn	Ile	Met	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	
			305				310						315	320		

Thr Pro Ser Ser Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Ile
115 120 125

Pro 130	Phe	Thr	Leu	Asn	Phe	Thr 135	Ile	Thr	Asn	Leu	Gln 140	Tyr	Glu	Glu	Asn
Met 145	Gly	His	Pro	Gly	Ser 150	Arg	Lys	Phe	Asn	Ile 155	Thr	Glu	Arg	Val	Leu 160
Gln	Gly	Leu	Leu	Lys 165	Pro	Leu	Phe	Arg	Asn 170	Ser	Ser	Leu	Glu	Tyr 175	Leu
Tyr	Ser	Gly	Cys 180	Arg	Leu	Thr	Ser	Leu 185	Arg	Pro	Glu	Lys	Asp 190	Ser	Ser
Thr	Met	Ala 195	Val	Asp	Ala	Ile	Cys 200	Thr	His	Arg	Pro	Asp 205	Pro	Glu	Asp
Leu	Gly 210	Leu	Asp	Arg	Glu	Arg 215	Leu	Tyr	Trp	Glu	Leu 220	Ser	Asn	Leu	Thr
Asn 225	Gly	Ile	Gln	Glu	Leu 230	Gly	Pro	Tyr	Thr	Leu 235	Asp	Arg	Asn	Ser	Leu 240
Tyr	Val	Asn	Gly	Phe 245	Thr	His	Arg	Ser	Phe 250	Met	Pro	Thr	Thr	Ser 255	Thr
Leu	Gly	Thr	Ser 260	Thr	Val	Asp	Val	Gly 265	Thr	Ser	Gly	Thr	Pro 270	Ser	Ser
Ser	Pro	Ser 275	Pro	Thr	Thr	Ala	Gly 280	Pro	Leu	Leu	Met	Pro 285	Phe	Thr	Leu
Asn	Phe 290	Thr	Ile	Thr	Asn	Leu 295	Gln	Tyr	Glu	Glu	Asp 300	Met	Arg	Arg	Thr
Gly 305	Ser	Arg	Lys	Phe	Asn 310	Thr	Met	Glu	Ser	Val 315	Leu	Gln	Gly	Leu	Leu 320
Lys	Pro	Leu	Phe	Lys 325	Asn	Thr	Ser	Val	Gly 330	Pro	Leu	Tyr	Ser	Gly 335	Cys
Arg	Leu	Thr	Leu 340	Leu	Arg	Pro	Lys	Lys 345	Asp	Gly	Ala	Ala	Thr 350	Gly	Val
Asp	Ala	Ile 355	Cys	Thr	His	Arg	Leu 360	Asp	Pro	Lys	Ser	Pro 365	Gly	Leu	Asn
Arg	Glu 370	Gln	Leu	Tyr	Trp	Glu 375	Leu	Ser	Lys	Leu	Thr 380	Asn	Asp	Ile	Glu
Glu 385	Leu	Gly	Pro	Tyr	Thr 390	Leu	Asp	Arg	Asn	Ser 395	Leu	Tyr	Val	Asn	Gly 400
Phe	Thr	His	Gln	Ser 405	Ser	Val	Ser	Thr	Thr 410	Ser	Thr	Pro	Gly	Thr 415	Ser
Thr	Val	Asp	Pro 420	Arg	Thr	Ser	Gly	Thr 425	Pro	Ser	Ser	Leu	Ser 430	Ser	Pro
Thr	Ile	Met	Ala	Ala	Gly	Pro	Leu	Leu	Ile						

440

<211> 379

<212> PRT

<213> Homo sapiens

<400> 45

Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys Asn Thr Ser
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Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
20 25 30

Lys Asn Gly Ala Ala Thr Gly Met Asp Ala Ile Cys Ser His Arg Leu
35 40 45

Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu
50 55 60

Ser Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp
65 70 75 80

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Ala
85 90 95

Pro Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly
100 105 110

Thr Pro Ser Ser Leu Pro Ser Pro Thr Thr Ala Val Pro Leu Leu Ile
115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Lys Tyr Glu Glu Asp
130 135 140

Met His Cys Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
145 150 155 160

Gln Ser Leu Phe Gly Pro Met Phe Lys Asn Thr Ser Val Gly Pro Leu
165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Phe Arg Ser Glu Lys Asp Gly Ala
180 185 190

Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser
195 200 205

Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr
210 215 220

Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu
225 230 235 240

Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu
370 375

<213> Homo sapiens

<223> Any "X" = any amino acid

<400> 46

Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu

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Arg	Asp	Ser	Leu	Tyr 85	Val	Asn	Gly	Phe	Thr 90	His	Arg	Ser	Ser	Val 95	Pro
Thr	Thr	Ser	Ile 100	Pro	Gly	Thr	Ser	Ala 105	Val	His	Leu	Glu	Thr 110	Ser	Gly
Thr	Pro	Ala 115	Ser	Leu	Pro	Gly	His 120	Thr	Ala	Pro	Gly	Pro 125	Leu	Leu	Ile
Pro	Phe 130	Thr	Leu	Asn	Phe	Thr 135	Ile	Thr	Asn	Leu	His 140	Tyr	Glu	Glu	Asn
Met 145	Gln	His	Pro	Gly	Ser 150	Arg	Lys	Phe	Asn	Thr 155	Met	Glu	Arg	Val	Leu 160
Gln	Gly	Cys	Leu	Val 165	Pro	Cys	Ser	Arg	Asn	Thr 170	Asn	Val	Gly	Leu 175	Leu
Tyr	Ser	Gly	Cys 180	Arg	Leu	Thr	Leu	Leu 185	Xaa	Xaa	Xaa	Xaa	Xaa 190	Xaa	Xaa
Xaa	Xaa	Xaa 195	Xaa	Xaa	Xaa	Xaa	Xaa 200	Xaa	Xaa	Xaa	Xaa	Xaa 205	Xaa	Xaa	Xaa
Xaa	Xaa 210	Xaa	Xaa	Xaa	Xaa	Xaa 215	Xaa	Xaa	Xaa	Xaa 220	Xaa	Xaa	Xaa	Xaa	Xaa
Xaa 225	Xaa	Xaa	Xaa	Xaa 230	Gly	Pro	Tyr	Thr	Leu 235	Asp	Arg	Asn	Ser	Leu 240	
Tyr	Val	Asn	Gly	Phe 245	Thr	His	Arg	Ser	Ser 250	Val	Ala	Pro	Thr	Ser 255	Thr
Pro	Gly	Thr	Ser 260	Thr	Val	Asp	Leu	Gly 265	Thr	Ser	Gly	Thr	Pro 270	Ser	Ser
Leu	Pro	Ser 275	Pro	Thr	Thr	Val	Pro 280	Leu	Leu	Val	Pro	Phe 285	Thr	Leu	Asn
Phe 290	Thr	Ile	Thr	Asn	Leu	Gln 295	Tyr	Gly	Glu	Asp	Met 300	Arg	His	Pro	Gly
Ser 305	Arg	Lys	Phe	Asn	Thr 310	Thr	Glu	Arg	Val	Leu 315	Gln	Gly	Leu	Leu	Gly 320
Pro	Leu	Phe	Lys	Asn 325	Ser	Ser	Val	Gly	Pro 330	Leu	Tyr	Ser	Gly	Cys 335	Arg
Leu	Ile	Ser	Leu 340	Arg	Ser	Glu	Lys	Asp 345	Gly	Ala	Ala	Thr	Gly 350	Val	Asp
Ala	Ile	Cys 355	Thr	His	His	Leu	Asn 360	Pro	Gln	Ser	Pro	Gly 365	Leu	Asp	Arg

Gln Gly Pro Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu
165 170 175

Tyr	Ser	Gly	Cys 180	Arg	Leu	Thr	Ser	Leu	Arg	Pro	Glu	Lys	Asp	Gly	Ala
Ala	Thr	Gly 195	Met	Asp	Ala	Val	Cys 200	Leu	Tyr	His	Pro	Asn 205	Pro	Lys	Arg
Pro	Gly 210	Leu	Asp	Arg	Glu	Gln 215	Leu	Tyr	Trp	Glu	Leu 220	Ser	Gln	Leu	Thr
His 225	Asn	Ile	Thr	Glu	Leu 230	Gly	Pro	Tyr	Ser	Leu 235	Asp	Arg	Asp	Ser	Leu 240
Tyr	Val	Asn	Gly	Phe 245	Thr	His	Gln	Asn	Ser 250	Val	Pro	Thr	Thr	Ser 255	Thr
Pro	Gly	Thr	Ser 260	Thr	Val	Tyr	Trp	Ala 265	Thr	Thr	Gly	Thr	Pro 270	Ser	Ser
Phe	Pro	Gly 275	His	Thr	Glu	Pro	Gly 280	Pro	Leu	Leu	Ile	Pro 285	Phe	Thr	Leu
Asn	Phe 290	Thr	Ile	Thr	Asn	Leu 295	Gln	Tyr	Glu	Glu	Asn 300	Met	Gly	His	Pro
Gly 305	Ser	Arg	Lys	Phe	Asn 310	Ile	Thr	Glu	Arg	Val 315	Leu	Gln	Gly	Leu	Leu 320
Asn	Pro	Ile	Phe	Lys 325	Asn	Ser	Ser	Val	Gly 330	Pro	Leu	Tyr	Ser	Gly 335	Cys
Arg	Leu	Thr	Ser 340	Leu	Arg	Pro	Glu	Lys 345	Asp	Gly	Ala	Ala	Thr 350	Gly	Met
Asp	Ala	Val 355	Cys	Leu	Tyr	His	Pro 360	Asn	Pro	Lys	Arg	Pro 365	Gly	Leu	Asp
Arg	Glu 370	Gln	Leu	Tyr	Cys	Glu 375	Leu	Ser	Gln	Leu	Thr 380	His	Asn	Ile	Thr
Glu 385	Leu	Gly	Pro	Tyr	Ser 390	Leu	Asp	Arg	Asp	Ser 395	Leu	Tyr	Val	Asn	Gly 400
Phe	Thr	His	Gln	Asn 405	Ser	Val	Pro	Thr	Thr 410	Ser	Thr	Pro	Gly	Thr 415	Ser
Thr	Val	Tyr	Trp 420	Ala	Thr	Thr	Gly	Thr 425	Pro	Ser	Ser	Phe	Pro 430	Gly	His
Thr	Glu	Pro 435	Gly	Pro	Leu	Leu	Ile 440	Pro	Phe	Thr	Leu	Asn 445	Phe	Thr	Ile
Thr	Asn 450	Leu	Gln	Tyr	Glu	Glu 455	Asp	Met	Arg	Arg	Thr 460	Gly	Ser	Arg	Lys
Phe 465	Asn	Thr	Met	Glu	Arg 470	Val	Leu	Gln	Gly	Leu 475	Leu	Lys	Pro	Leu	Phe 480
Lys	Ser	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu

			485					490					495				
Leu	Arg	Pro	Glu 500	Lys	His	Gly	Ala	Ala 505	Thr	Gly	Val	Asp	Ala 510	Ile	Cys		
Thr	Leu	Arg 515	Leu	Asp	Pro	Thr	Gly 520	Pro	Gly	Leu	Asp	Arg 525	Glu	Arg	Leu		
Tyr	Trp 530	Glu	Leu	Ser	Gln	Leu 535	Thr	Asn	Ser	Val	Thr 540	Glu	Leu	Gly	Pro		
Tyr 545	Thr	Leu	Asp	Arg	Asp 550	Ser	Leu	Tyr	Val	Asn 555	Gly	Phe	Thr	His	Arg 560		
Ser	Ser	Val	Pro	Thr 565	Thr	Ser	Ile	Pro	Gly 570	Thr	Ser	Ala	Val	His 575	Leu		
Glu	Thr	Ser	Gly 580	Thr	Pro	Ala	Ser	Leu 585	Pro	Gly	His	Thr	Ala 590	Pro	Gly		
Pro	Leu	Leu 595	Val	Pro	Phe	Thr	Leu 600	Asn	Phe	Thr	Ile	Thr 605	Asn	Leu	Gln		
Tyr	Glu 610	Glu	Asp	Met	Arg	His 615	Pro	Gly	Ser	Arg	Lys 620	Phe	Asn	Thr	Thr		
Glu 625	Arg	Val	Leu	Gln	Gly 630	Leu	Leu	Lys	Pro	Leu 635	Phe	Lys	Ser	Thr	Ser 640		
Val	Gly	Pro	Leu	Tyr 645	Ser	Gly	Cys	Arg	Leu 650	Thr	Leu	Leu	Arg	Pro 655	Glu		
Lys	Arg	Gly	Ala 660	Ala	Thr	Gly	Val	Asp 665	Thr	Ile	Cys	Thr	His 670	Arg	Leu		
Asp	Pro	Leu 675	Asn	Pro	Gly	Leu	Asp 680	Arg	Glu	Gln	Leu	Tyr 685	Trp	Glu	Leu		
Ser	Lys 690	Leu	Thr	Arg	Gly	Ile 695	Ile	Glu	Leu	Gly	Pro 700	Tyr	Leu	Leu	Asp		
Arg 705	Gly	Ser	Leu	Tyr	Val 710	Asn	Gly	Phe	Thr	His 715	Arg	Asn	Phe	Val	Pro 720		
Ile	Thr	Ser	Thr	Pro 725	Gly	Thr	Ser	Thr	Val 730	His	Leu	Gly	Thr	Ser 735	Glu		
Thr	Pro	Ser	Ser 740	Leu	Pro	Arg	Pro	Ile 745	Val	Pro	Gly	Pro	Leu 750	Leu	Ile		
Pro	Phe	Thr 755	Leu	Asn	Phe	Thr	Ile 760	Thr	Asn	Leu	Gln	Tyr 765	Glu	Glu	Asn		
Met	Gly 770	His	Pro	Gly	Ser	Arg 775	Lys	Phe	Asn	Ile	Thr 780	Glu	Arg	Val	Leu		
Gln 785	Gly	Leu	Leu	Lys	Pro 790	Leu	Phe	Arg	Asn	Ser 795	Ser	Leu	Glu	Tyr	Leu 800		

Tyr	Ser	Gly	Cys	Arg	Leu	Ala	Ser	Leu	Arg	Pro	Glu	Lys	Asp	Ser	Ser	
				805					810					815		
Ala	Met	Ala	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Pro	Asp	Pro	Glu	Asp	
				820					825					830		
Leu	Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr	Trp	Glu	Leu	Ser	Asn	Leu	Thr	
				835					840					845		
Asn	Gly	Ile	Gln	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	
				850					855					860		
Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Met	Pro	Thr	Thr	Ser	Thr	
				865					870					875		
Pro	Gly	Thr	Ser	Thr	Val	Asp	Val	Gly	Thr	Ser	Gly	Thr	Pro	Ser	Ser	
				885					890					895		
Ser	Pro	Ser	Pro	Thr	Thr	Ala	Gly	Pro	Leu	Leu	Met	Pro	Phe	Thr	Leu	
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Asp	Ala	Val 35	Cys	Thr	His	Arg	Pro 40	Asp	Pro	Lys	Ser	Pro 45	Gly	Leu	Asp
Arg 50	Glu	Arg	Leu	Tyr	Trp 55	Lys	Leu	Ser	Gln	Leu	Thr 60	His	Gly	Ile	Ile
Glu 65	Leu	Gly	Pro	Tyr	Thr 70	Leu	Asp	Arg	His	Ser 75	Phe	Tyr	Val	Asn	Gly 80
Phe	Thr	His	Gln	Ser 85	Ser	Met	Thr	Thr 90	Thr	Arg	Thr	Pro	Asp 95	Thr	Ser
Thr	Met	His	Leu 100	Ala	Thr	Ser	Arg	Thr 105	Pro	Ala	Ser	Leu	Ser 110	Gly	Pro
Thr	Thr	Ala 115	Ser	Pro	Leu	Leu	Val 120	Leu	Phe	Thr	Ile	Asn 125	Phe	Thr	Ile
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Phe 145	Asn	Thr	Thr	Glu	Arg 150	Val	Leu	Gln	Gly	Leu 155	Leu	Arg	Pro	Val	Phe 160
Lys	Asn	Thr	Ser	Val 165	Gly	Pro	Leu	Tyr	Ser 170	Gly	Cys	Arg	Leu	Thr 175	Leu
Leu	Arg	Pro	Lys 180	Lys	Asp	Gly	Ala 185	Ala	Thr	Lys	Val	Asp 190	Ala	Ile	Cys
Thr	Tyr	Arg 195	Pro	Asp	Pro	Lys	Ser 200	Pro	Gly	Leu	Asp	Arg 205	Glu	Gln	Leu
Tyr 210	Trp	Glu	Leu	Ser	Gln	Leu 215	Thr	His	Ser	Ile	Thr 220	Glu	Leu	Gly	Pro
Tyr 225	Thr	Gln	Asp	Arg	Asp 230	Ser	Leu	Tyr	Val	Asn 235	Gly	Phe	Thr	His	Arg 240
Ser	Ser	Val	Pro	Thr 245	Thr	Ser	Ile	Pro	Gly 250	Thr	Ser	Ala	Val	His 255	Leu
Glu	Thr	Ser	Gly 260	Thr	Pro	Ala	Ser	Leu 265	Pro	Gly	Pro	Ser	Ala 270	Ala	Ser
Pro	Leu	Leu	Val 275	Leu	Phe	Thr	Leu 280	Asn	Phe	Thr	Ile	Thr 285	Asn	Leu	Arg

Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr
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 Glu Arg Val Leu Gln Gly Leu Leu Arg Ser Leu Phe Lys Ser Thr Ser
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 Thr Gly Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro Thr Gly Pro
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 Val Val Ser Glu Glu Pro Phe Thr Leu Asn Phe Thr Ile Asn Asn Leu
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 Thr Asp Asn Val Met Lys His Leu Leu Ser Pro Leu Phe Gln Arg Ser

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 Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
 645 650 655
 Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu
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 Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu
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 Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp
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 Arg Gly Ser Leu Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro
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 Ile Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu
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 Thr Pro Ser Ser Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Ile
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 Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn
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 Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Thr Glu Arg Val Leu
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 Gln Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu
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 Thr Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser
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1235		1240		1245	
Glu Arg	Val Leu Gln Gly	Leu	Leu Arg Pro Val	Phe	Lys Asn Thr
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Ser Val	Gly Pro Leu Tyr	Ser	Gly Cys Arg Leu	Thr	Leu Leu Arg
1265		1270		1275	
Pro Lys	Lys Asp Gly Ala	Ala	Thr Lys Val Asp	Ala	Ile Cys Thr
1280		1285		1290	
Tyr Arg	Pro Asp Pro Lys	Ser	Pro Gly Leu Asp	Arg	Glu Gln Leu
1295		1300		1305	
Tyr Trp	Glu Leu Ser Gln	Leu	Thr His Ser Ile	Thr	Glu Leu Gly
1310		1315		1320	
Pro Tyr	Thr Gln Asp Arg	Asp	Ser Leu Tyr Val	Asn	Gly Phe Thr
1325		1330		1335	
His Arg	Ser Ser Val Pro	Thr	Thr Ser Ile Pro	Gly	Thr Ser Ala
1340		1345		1350	
Val His	Leu Glu Thr Ser	Gly	Thr Pro Ala Ser	Leu	Pro Gly Pro
1355		1360		1365	
Ser Ala	Ala Ser Pro Leu	Leu	Val Leu Phe Thr	Leu	Asn Phe Thr
1370		1375		1380	
Ile Thr	Asn Leu Arg Tyr	Glu	Glu Asn Met Gln	His	Pro Gly Ser
1385		1390		1395	
Arg Lys	Phe Asn Thr Thr	Glu	Arg Val Leu Gln	Gly	Leu Leu Arg
1400		1405		1410	
Ser Leu	Phe Lys Ser Thr	Ser	Val Gly Pro Leu	Tyr	Ser Gly Cys
1415		1420		1425	
Arg Leu	Thr Leu Leu Arg	Pro	Glu Lys Asp Gly	Thr	Ala Thr Gly
1430		1435		1440	
Val Asp	Ala Ile Cys Thr	His	His Pro Asp Pro	Lys	Ser Pro Arg
1445		1450		1455	
Leu Asp	Arg Glu Gln Leu	Tyr	Trp Glu Leu Ser	Gln	Leu Thr His
1460		1465		1470	
Asn Ile	Thr Glu Leu Gly	His	Tyr Ala Leu Asp	Asn	Asp Ser Leu
1475		1480		1485	
Phe Val	Asn Gly Phe Thr	His	Arg Ser Ser Val	Ser	Thr Thr Ser
1490		1495		1500	
Thr Pro	Gly Thr Pro Thr	Val	Tyr Leu Gly Ala	Ser	Lys Thr Pro

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Met Trp Pro Gly Ser Arg	Lys Phe Asn Thr Thr	Glu Arg Val Leu
1550	1555	1560
Gln Gly Leu Leu Arg Pro	Leu Phe Lys Asn Thr	Ser Val Gly Pro
1565	1570	1575
Leu Tyr Ser Gly Ser Arg	Leu Thr Leu Leu Arg	Pro Glu Lys Asp
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Gly Glu Ala Thr Gly Val	Asp Ala Ile Cys Thr	His Arg Pro Asp
1595	1600	1605
Pro Thr Gly Pro Gly Leu	Asp Arg Glu Gln Leu	Tyr Leu Glu Leu
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Ser Gln Leu Thr His Ser	Ile Thr Glu Leu Gly	Pro Tyr Thr Leu
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Asp Arg Asp Ser Leu Tyr	Val Asn Gly Phe Thr	His Arg Ser Ser
1640	1645	1650
Val Pro Thr Thr Ser Thr	Gly Val Val Ser Glu	Glu Pro Phe Thr
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Gln Pro Gly Ser Leu Lys	Phe Asn Ile Thr Asp	Asn Val Met Lys
1685	1690	1695
His Leu Leu Ser Pro Leu	Phe Gln Arg Ser Ser	Leu Gly Ala Arg
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1730	1735	1740
Ser Gly Pro Gly Leu Pro	Ile Lys Gln Val Phe	His Glu Leu Ser
1745	1750	1755
Gln Gln Thr His Gly Ile	Thr Arg Leu Gly Pro	Tyr Ser Leu Asp
1760	1765	1770
Lys Asp Ser Leu Tyr Leu	Asn Gly Tyr Asn Glu	Pro Gly Leu Asp
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Thr	Leu	Asn	Phe	Thr	Ile	Ser	Asn	Leu	Gln	Tyr	Ser	Pro	Asp	Met
1820						1825					1830			
Gly	Lys	Gly	Ser	Ala	Thr	Phe	Asn	Ser	Thr	Glu	Gly	Val	Leu	Gln
1835						1840					1845			
His	Leu	Leu	Arg	Pro	Leu	Phe	Gln	Lys	Ser	Ser	Met	Gly	Pro	Phe
1850						1855					1860			
Tyr	Leu	Gly	Cys	Gln	Leu	Ile	Ser	Leu	Arg	Pro	Glu	Lys	Asp	Gly
1865						1870					1875			
Ala	Ala	Thr	Gly	Val	Asp	Thr	Thr	Cys	Thr	Tyr	His	Pro	Asp	Pro
1880						1885					1890			
Val	Gly	Pro	Gly	Leu	Asp	Ile	Gln	Gln	Leu	Tyr	Trp	Glu	Leu	Ser
1895						1900					1905			
Gln	Leu	Thr	His	Gly	Val	Thr	Gln	Leu	Gly	Phe	Tyr	Val	Leu	Asp
1910						1915					1920			
Arg	Asp	Ser	Leu	Phe	Ile	Asn	Gly	Tyr	Ala	Pro	Gln	Asn	Leu	Ser
1925						1930					1935			
Ile	Arg	Gly	Glu	Tyr	Gln	Ile	Asn	Phe	His	Ile	Val	Asn	Trp	Asn
1940						1945					1950			
Leu	Ser	Asn	Pro	Asp	Pro	Thr	Ser	Ser	Glu	Tyr	Ile	Thr	Leu	Leu
1955						1960					1965			
Arg	Asp	Ile	Gln	Asp	Lys	Val	Thr	Thr	Leu	Tyr	Lys	Gly	Ser	Gln
1970						1975					1980			
Leu	His	Asp	Thr	Phe	Arg	Phe	Cys	Leu	Val	Thr	Asn	Leu	Thr	Met
1985						1990					1995			
Asp	Ser	Val	Leu	Val	Thr	Val	Lys	Ala	Leu	Phe	Ser	Ser	Asn	Leu
2000						2005					2010			
Asp	Pro	Ser	Leu	Val	Glu	Gln	Val	Phe	Leu	Asp	Lys	Thr	Leu	Asn
2015						2020					2025			
Ala	Ser	Phe	His	Trp	Leu	Gly	Ser	Thr	Tyr	Gln	Leu	Val	Asp	Ile
2030						2035					2040			
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2045						2050					2055			
Ser	Ser	Thr	Gln	His	Phe	Tyr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu
2060						2065					2070			
Pro	Tyr	Ser	Gln	Asp	Lys	Ala	Gln	Pro	Gly	Thr	Thr	Asn	Tyr	Gln
2075						2080					2085			
Arg	Asn	Lys	Arg	Asn	Ile	Glu	Asp	Ala	Leu	Asn	Gln	Leu	Phe	Arg
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Phe	Arg	Ser	Val	Pro	Asn	Arg	His	His	Thr	Gly	Val	Asp	Ser	Leu
2120						2125					2130			
Cys	Asn	Phe	Ser	Pro	Leu	Ala	Arg	Arg	Val	Asp	Arg	Val	Ala	Ile
2135						2140					2145			
Tyr	Glu	Glu	Phe	Leu	Arg	Met	Thr	Arg	Asn	Gly	Thr	Gln	Leu	Gln
2150						2155					2160			
Asn	Phe	Thr	Leu	Asp	Arg	Ser	Ser	Val	Leu	Val	Asp	Gly	Tyr	Ser
2165						2170					2175			
Pro	Asn	Arg	Asn	Glu	Pro	Leu	Thr	Gly	Asn	Ser	Asp	Leu	Pro	Phe
2180						2185					2190			
Trp	Ala	Val	Ile	Leu	Ile	Gly	Leu	Ala	Gly	Leu	Leu	Gly	Leu	Ile
2195						2200					2205			
Thr	Cys	Leu	Ile	Cys	Gly	Val	Leu	Val	Thr	Thr	Arg	Arg	Arg	Lys
2210						2215					2220			
Lys	Glu	Gly	Glu	Tyr	Asn	Val	Gln	Gln	Gln	Cys	Pro	Gly	Tyr	Tyr
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22

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<213> Homo sapiens

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Lys	Asp	Gly 35	Ala	Ala	Thr	Lys	Val 40	Asp	Ala	Ile	Cys	Thr 45	Tyr	Arg	Pro
Asp	Pro 50	Lys	Ser	Pro	Gly	Leu 55	Asp	Arg	Glu	Gln	Leu 60	Tyr	Trp	Glu	Leu
Ser 65	Gln	Leu	Thr	His	Ser 70	Ile	Thr	Glu	Leu	Gly 75	Pro	Tyr	Thr	Leu	Asp 80
Arg	Asp	Ser	Leu	Tyr 85	Val	Asn	Gly	Phe	Thr 90	Gln	Arg	Ser	Ser	Val 95	Pro
Thr	Thr	Ser	Ile 100	Pro	Gly	Thr	Pro	Thr 105	Val	Asp	Leu	Gly	Thr 110	Ser	Gly
Thr	Pro	Val 115	Ser	Lys	Pro	Gly	Pro	Ser	Ala	Ala	Ser	Pro 125	Leu	Leu	Ile
Pro	Phe 130	Thr	Ile	Asn	Phe	Thr 135	Ile	Thr	Asn	Leu	Arg 140	Tyr	Glu	Glu	Asn
Met 145	Gly	His	Pro	Gly	Ser 150	Arg	Lys	Phe	Asn	Ile	Met	Glu	Arg	Val	Leu 160
Gln	Gly	Leu	Leu	Lys 165	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro 175	Leu
Tyr	Ser	Gly	Cys 180	Arg	Leu	Thr	Leu	Leu 185	Arg	Pro	Lys	Lys	Asp 190	Gly	Ala
Ala	Thr	Gly 195	Val	Asp	Ala	Ile	Cys 200	Thr	His	Arg	Leu	Asp 205	Pro	Lys	Ser
Pro	Gly 210	Leu	Asn	Arg	Glu	Gln 215	Leu	Tyr	Trp	Glu	Leu 220	Ser	Lys	Leu	Thr
Asn 225	Asp	Ile	Glu	Glu	Leu 230	Gly	Pro	Tyr	Thr	Leu 235	Asp	Arg	Asn	Ser	Leu 240
Tyr	Val	Asn	Gly	Phe 245	Thr	His	Gln	Ser	Ser 250	Val	Ser	Thr	Thr	Ser 255	Thr
Pro	Gly	Thr	Ser 260	Thr	Val	Asp	Leu	Arg 265	Thr	Ser	Gly	Thr	Pro 270	Ser	Ser
Leu	Ser	Ser 275	Pro	Thr	Ile	Met	Ala 280	Ala	Gly	Pro	Leu	Leu 285	Ile	Pro	Phe

Thr Ile Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn Met His
 290 295 300
 His Pro Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu Gln Gly
 305 310 315 320
 Leu Leu Met Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser
 325 330 335
 Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr
 340 345 350
 Arg Val Asp Ala Val Cys Thr His Arg Pro Asp Pro Lys Ser Pro Gly
 355 360 365
 Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln Leu Thr His Gly
 370 375 380
 Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val
 385 390 395 400
 Asn Gly Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser Thr Pro Gly
 405 410 415
 Thr Ser Thr Val Asp Val Gly Thr Ser Gly Thr Pro Ser Ser Ser Pro
 420 425 430
 Ser Pro Thr Thr Ala Gly Pro Leu Leu Met Pro Phe Thr Leu Asn Phe
 435 440 445
 Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr Gly Ser
 450 455 460
 Arg Lys Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu Lys Pro
 465 470 475 480
 Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu
 485 490 495
 Thr Leu Leu Arg Pro Glu Lys His Gly Ala Ala Thr Gly Val Asp Ala
 500 505 510
 Ile Cys Thr Leu Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu
 515 520 525
 Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser Val Thr Glu Leu
 530 535 540
 Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr
 545 550 555 560
 His Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Ser Ala Val
 565 570 575
 His Leu Glu Thr Ser Gly Thr Pro Ala Ser Leu Pro Gly His Thr Ala
 580 585 590
 Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

	595					600					605				
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Thr 625	Met	Glu	Arg	Val	Leu 630	Gln	Gly	Cys	Leu	Val 635	Pro	Cys	Ser	Arg	Asn 640
Thr	Asn	Val	Gly	Leu 645	Leu	Tyr	Ser	Gly	Cys 650	Arg	Leu	Thr	Leu	Leu 655	Arg
Xaa	Glu	Lys	Xaa 660	Xaa	Ala	Ala	Thr	Xaa 665	Val	Asp	Xaa	Xaa	Cys 670	Xaa	Xaa
Xaa	Xaa	Asp 675	Pro	Xaa	Xaa	Pro	Gly 680	Leu	Asp	Arg	Glu	Xaa 685	Leu	Tyr	Trp
Glu 690	Leu	Ser	Xaa	Leu	Thr	Xaa 695	Xaa	Ile	Xaa	Glu	Leu 700	Gly	Pro	Tyr	Thr
Leu 705	Asp	Arg	Asn	Ser	Leu 710	Tyr	Val	Asn	Gly	Phe 715	Thr	His	Arg	Ser	Ser 720
Val	Ala	Pro	Thr	Ser 725	Thr	Pro	Gly	Thr	Ser 730	Thr	Val	Asp	Leu	Gly 735	Thr
Ser	Gly	Thr	Pro 740	Ser	Ser	Leu	Pro	Ser 745	Pro	Thr	Thr	Val	Pro 750	Leu	Leu
Val	Pro	Phe 755	Thr	Leu	Asn	Phe	Thr 760	Ile	Thr	Asn	Leu	Gln 765	Tyr	Gly	Glu
Asp 770	Met	Arg	His	Pro	Gly	Ser 775	Arg	Lys	Phe	Asn	Thr 780	Thr	Glu	Arg	Val
Leu 785	Gln	Gly	Leu	Leu	Gly 790	Pro	Leu	Phe	Lys	Asn 795	Ser	Ser	Val	Gly	Pro 800
Leu	Tyr	Ser	Gly	Cys 805	Arg	Leu	Ile	Ser	Leu 810	Arg	Ser	Glu	Lys	Asp 815	Gly
Ala	Ala	Thr	Gly 820	Val	Asp	Ala	Ile	Cys 825	Thr	His	His	Leu	Asn 830	Pro	Gln
Ser	Pro	Gly 835	Leu	Asp	Arg	Glu	Gln 840	Leu	Tyr	Trp	Gln	Leu 845	Ser	Gln	Val
Thr 850	Asn	Gly	Ile	Lys	Glu	Leu 855	Gly	Pro	Tyr	Thr	Leu 860	Asp	Arg	Asn	Ser
Leu 865	Tyr	Val	Asn	Gly	Phe 870	Thr	His	Arg	Ser	Ser 875	Gly	Leu	Thr	Thr	Ser 880
Thr	Pro	Trp	Thr	Ser 885	Thr	Val	Asp	Leu	Gly 890	Thr	Ser	Gly	Thr	Pro 895	Ser
Pro	Val	Pro	Ser 900	Pro	Thr	Thr	Ala	Gly 905	Pro	Leu	Leu	Ile			

<213> Homo sapiens

Gln 1	Gly	Leu	Leu	Gly 5	Pro	Met	Phe	Lys	Asn 10	Thr	Ser	Val	Gly	Leu 15	Leu
Tyr	Ser	Gly	Cys 20	Arg	Leu	Thr	Leu	Leu 25	Arg	Pro	Glu	Lys	Arg 30	Gly	Ala
Ala	Thr	Gly 35	Val	Asp	Thr	Ile	Cys 40	Thr	His	Arg	Leu	Asp 45	Pro	Leu	Asn
Pro	Gly 50	Leu	Asp	Arg	Glu	Gln 55	Leu	Tyr	Trp	Glu	Leu 60	Ser	Lys	Leu	Thr
Arg 65	Gly	Ile	Ile	Glu	Leu 70	Gly	Pro	Tyr	Leu	Leu 75	Asp	Arg	Gly	Ser	Leu 80
Tyr	Val	Asn	Gly	Phe 85	Thr	His	Arg	Asn	Phe 90	Val	Pro	Ile	Thr	Ser 95	Thr
Pro	Gly	Thr	Ser 100	Thr	Val	His	Leu	Gly 105	Thr	Ser	Glu	Thr	Pro 110	Ser	Ser
Leu	Pro	Arg 115	Pro	Ile	Val	Pro	Gly 120	Pro	Leu	Leu	Val	Pro 125	Phe	Thr	Leu
Asn 130	Phe	Thr	Ile	Thr	Asn	Leu 135	Gln	Tyr	Glu	Glu	Ala 140	Met	Arg	His	Pro
Gly 145	Ser	Arg	Lys	Phe	Asn 150	Thr	Thr	Glu	Arg	Val	Leu 155	Gln	Gly	Leu	Leu 160
Arg	Pro	Leu	Phe	Lys 165	Asn	Thr	Ser	Val	Ser 170	Ser	Leu	Tyr	Ser	Gly 175	Cys
Arg	Leu	Thr	Leu 180	Leu	Arg	Pro	Glu	Lys 185	Asp	Gly	Ala	Ala	Thr 190	Arg	Val
Asp	Ala	Ala 195	Cys	Thr	Tyr	Arg	Pro 200	Asp	Pro	Lys	Ser	Pro 205	Gly	Leu	Asp
Arg	Glu 210	Gln	Leu	Tyr	Trp	Glu 215	Leu	Ser	Gln	Leu	Thr 220	His	Ser	Ile	Thr
Glu 225	Leu	Gly	Pro	Tyr	Thr 230	Leu	Asp	Arg	Val	Ser 235	Leu	Tyr	Val	Asn	Gly 240
Phe	Asn	Pro	Arg	Ser 245	Ser	Val	Pro	Thr	Thr 250	Ser	Thr	Pro	Gly	Thr 255	Ser

Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser Leu Pro Gly His
 260 265 270
 Thr Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile
 275 280 285
 Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys
 290 295 300
 Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe
 305 310 315 320
 Lys Asn Thr Ser Ile Gly Pro Leu Tyr Ser Ser Cys Arg Leu Thr Leu
 325 330 335
 Leu Arg Pro Glu Lys Asp Lys Ala Ala Thr Arg Val Asp Ala Ile Cys
 340 345 350
 Thr His His Pro Asp Pro Gln Ser Pro Gly Leu Asn Arg Glu Gln Leu
 355 360 365
 Tyr Trp Glu Leu Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro
 370 375 380
 Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asp Gly Phe Thr His Trp
 385 390 395 400
 Ser Pro Ile Pro Thr Thr Ser Thr Pro Gly Thr Ser Ile Val Asn Leu
 405 410 415
 Gly Thr Ser Gly Ile Pro Pro Ser Leu Pro Glu Thr Thr Ala Thr Gly
 420 425 430
 Pro Leu Leu Ile Pro Phe Thr Pro Asn Phe Thr Ile Thr Asn Leu Gln
 435 440 445
 Tyr Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met
 450 455 460
 Glu Arg Val Leu Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser
 465 470 475 480
 Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu
 485 490 495
 Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro
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 Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr
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<210> 71

<211> 594

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<213> Homo sapiens

<400> 72

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Arg Leu Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp
35 40 45

Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr
50 55 60

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Thr Ser
65 70 75 80

Ala Pro Asn Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr
85 90 95

Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Ser Ala Gly Pro Leu
100 105 110

Leu Ile Pro Phe Thr Ile Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu
115 120 125

Glu Asn Met His His Pro Gly Ser Arg Lys Phe Asn Thr Met Glu Arg
130 135 140

Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Ser	Thr	Ser	Val	Gly
145					150					155					160

Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp
165 170 175

Gly Val Ala Thr Arg Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro
180 185 190

Lys Ile Pro Gly Leu Asp Arg Gln Gln Leu Tyr Trp Glu Leu Ser Gln
195 200 205

Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp
210 215 220

Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser Val Pro Thr Thr
225 230 235 240

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys

20										25										30										
Lys	Asp	Gly	Ala	Ala	Thr	Lys	Val	Asp	Ala	Ile	Cys	Thr	Tyr	Arg	Pro															
		35						40						45																
Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu															
		50				55					60																			
Ser	Gln	Leu	Thr	His	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp															
		65			70					75					80															
Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	Gln	Arg	Ser	Ser	Val	Pro															
			85						90					95																
Thr	Thr	Ser	Ile	Pro	Gly	Thr	Pro	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly															
			100					105					110																	
Thr	Pro	Val	Ser	Lys	Pro	Gly	Pro	Ser	Ala	Ala	Ser	Pro	Leu	Leu	Val															
		115					120					125																		
Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp															
		130				135					140																			
Met	His	Arg	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Ala	Thr	Glu	Arg	Val	Leu															
					150				155						160															
Gln	Gly	Leu	Leu	Ser	Pro	Ile	Phe	Lys	Asn	Ser	Ser	Val	Gly	Pro	Leu															
				165					170					175																
Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Ser	Leu	Arg	Pro	Glu	Lys	Asp	Gly	Ala															
			180					185					190																	
Ala	Thr	Gly	Met	Asp	Ala	Val	Cys	Leu	Tyr	His	Pro	Asn	Pro	Lys	Arg															
		195					200					205																		
Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr															
		210				215					220																			
His	Asn	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Ser	Leu	Asp	Arg	Asp	Ser	Leu															
		225			230					235					240															
Tyr	Val	Asn	Gly	Phe	Thr	His	Gln	Ser	Ser	Met	Thr	Thr	Thr	Arg	Thr															
			245					250						255																
Pro	Asp	Thr	Ser	Thr	Met	His	Leu	Ala	Thr	Ser	Arg	Thr	Pro	Ala	Ser															
			260				265						270																	
Leu	Ser	Gly	Pro	Thr	Thr	Ala	Ser	Pro	Leu	Leu	Ile	Pro	Phe																	
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<211> 286

<212> PRT

<213> Homo sapiens

<211> 286

<212> PRT

<213> Homo sapiens

<400> 76

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Leu Glu Tyr Leu Tyr Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu
20 25 30

Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro
35 40 45

Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu
50 55 60

Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp
65 70 75 80

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Gly Leu
85 90 95

Thr Thr Ser Thr Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly
100 105 110

Thr Pro Ser Pro Val Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Ile
115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn
130 135 140

Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu
145 150 155 160

Gln Gly Leu Leu Met Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu
165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala
180 185 190

Ala Thr Arg Val Asp Ala Val Cys Thr Gln Arg Pro Asp Pro Lys Ser
195 200 205

Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln Leu Thr
210 215 220

His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg His Ser Leu
225 230 235 240

Tyr Val Asn Gly Leu Thr His Gln Ser Ser Met Thr Thr Thr Arg Thr
245 250 255

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr

210					215					220					
Asn 225	Asp	Ile	Glu	Glu	Leu 230	Gly	Pro	Tyr	Thr	Leu 235	Asp	Arg	Asn	Ser	Leu 240
Tyr	Val	Asn	Gly	Phe 245	Thr	His	Gln	Ser	Ser 250	Val	Ser	Thr	Thr	Ser 255	Thr
Pro	Gly	Thr	Ser 260	Thr	Val	Asp	Leu 265	Arg	Thr	Ser	Gly	Thr	Pro 270	Ser	Ser
Leu	Ser	Ser 275	Pro	Thr	Ile	Met	Ala 280	Ala	Gly	Pro	Leu	Leu 285	Ile	Pro	Phe
<210>		78													
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<212>		PRT													
<213>		Homo sapiens													
<400>		78													
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Val	Gly	Pro	Leu 20	Tyr	Ser	Gly	Cys 25	Arg	Leu	Thr	Leu	Leu 30	Arg	Pro	Glu
Lys	Gln	Glu 35	Ala	Ala	Thr	Gly	Val 40	Asp	Thr	Ile	Cys 45	Thr	His	Arg	Val
Asp 50	Pro	Ile	Gly	Pro	Gly 55	Leu	Asp	Arg	Glu	Arg 60	Leu	Tyr	Trp	Glu	Leu
Ser 65	Gln	Leu	Thr	Asn 70	Ser	Ile	Thr	Glu	Leu 75	Gly	Pro	Tyr	Thr	Leu 80	Asp
Arg	Asp	Ser	Leu	Tyr 85	Val	Asn	Gly	Phe 90	Asn	Pro	Trp	Ser	Ser 95	Val	Pro
Thr	Thr	Ser 100	Thr	Pro	Gly	Thr	Ser 105	Thr	Val	His	Leu	Ala 110	Thr	Ser	Gly
Thr	Pro	Ser 115	Ser	Leu	Pro	Gly	His 120	Thr	Ala	Pro	Val 125	Pro	Leu	Leu	Ile
Pro 130	Phe	Thr	Leu	Asn	Phe	Thr 135	Ile	Thr	Asn	Leu 140	His	Tyr	Glu	Glu	Asn
Met 145	Gln	His	Pro	Gly	Ser 150	Arg	Lys	Phe	Asn	Thr 155	Thr	Glu	Arg	Val	Leu
Gln	Gly	Leu	Leu	Lys 165	Pro	Leu	Phe	Lys	Asn 170	Thr	Ser	Val	Gly	Pro 175	Leu

Tyr	Ser	Gly	Cys 180	Arg	Leu	Thr	Leu	Phe 185	Lys	Pro	Glu	Lys	His 190	Glu	Ala
Ala	Thr	Gly 195	Val	Asp	Ala	Ile	Cys 200	Thr	Leu	Arg	Leu	Asp 205	Pro	Thr	Gly
Pro	Gly 210	Leu	Asp	Arg	Gln	Leu 215	Tyr	Trp	Glu	Leu	Ser 220	Gln	Leu	Thr	Asn
Ser 225	Val	Thr	Glu	Leu	Gly 230	Pro	Tyr	Thr	Leu	Asp 235	Arg	Asp	Ser	Leu	Tyr 240
Val	Asn	Gly	Phe	Thr 245	His	Arg	Ser	Ser	Val 250	Pro	Thr	Thr	Ser	Ile 255	Pro
Gly	Thr	Ser	Ala 260	Val	His	Leu	Glu	Thr 265	Ser	Gly	Thr	Pro	Ala 270	Ser	Leu
Pro	Gly	His 275	Thr	Ala	Pro	Gly	Pro 280	Leu	Leu	Ile	Pro	Phe 285	Thr	Leu	Asn
Phe	Thr 290	Ile	Thr	Asn	Leu	Gln 295	Tyr	Glu	Glu	Asp	Met 300	Arg	Arg	Thr	Gly
Ser 305	Arg	Lys	Phe	Asn	Thr 310	Met	Glu	Arg	Val	Leu 315	Gln	Gly	Leu	Leu	Lys 320
Pro	Leu	Phe	Lys	Ser 325	Thr	Ser	Val	Gly	Pro 330	Leu	Tyr	Ser	Gly	Cys 335	Arg
Leu	Thr	Leu	Leu 340	Arg	Pro	Glu	Lys	Arg 345	Gly	Ala	Ala	Thr	Gly 350	Val	Asp
Thr	Ile	Cys 355	Thr	His	Arg	Leu	Asp 360	Pro	Leu	Asn	Pro	Gly 365	Leu	Asp	Arg
Glu	Gln 370	Leu	Tyr	Trp	Glu	Leu 375	Ser	Lys	Leu	Thr	Arg 380	Gly	Ile	Ile	Glu
Leu 385	Gly	Pro	Tyr	Leu	Leu 390	Asp	Arg	Gly	Ser	Leu 395	Tyr	Val	Asn	Gly	Phe 400
Thr	His	Arg	Asn 405	Phe	Val	Pro	Ile	Thr	Ser 410	Thr	Pro	Gly	Thr	Ser 415	Thr
Val	His	Leu	Gly 420	Thr	Ser	Glu	Thr	Pro 425	Ser	Ser	Leu	Pro	Arg 430	Pro	Ile
Val	Pro	Gly 435	Pro	Leu	Leu	Ile	Pro 440	Phe	Thr	Ile	Asn	Phe 445	Thr	Ile	Thr
Asn	Leu	Arg	Tyr	Glu	Glu	Asn 455	Met	His	His	Pro	Gly 460	Ser	Arg	Lys	Phe
Asn 465	Ile	Met	Glu	Arg	Val 470	Leu	Gln	Gly	Leu	Leu 475	Gly	Pro	Leu	Phe	Lys 480
Asn	Ser	Ser	Val	Gly 485	Pro	Leu	Tyr	Ser	Gly 490	Cys	Arg	Leu	Ile	Ser 495	Leu

Arg	Ser	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr
			500				505						510		
His	His	Leu	Asn	Pro	Gln	Ser	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr
			515				520						525		
Trp	Gln	Leu	Ser	Gln	Met	Thr	Asn	Gly	Ile	Lys	Glu	Leu	Gly	Pro	Tyr
			530				535						540		
Thr	Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser
			545				550						555		
Ser	Gly	Leu	Thr	Thr	Ser	Thr	Pro	Trp	Thr	Ser	Thr	Val	Asp	Leu	Gly
				565						570			575		
Thr	Ser	Gly	Thr	Pro	Ser	Pro	Val	Pro	Ser	Pro	Thr	Thr	Ala	Gly	Pro
			580				585						590		
Leu	Leu	Ile	Pro	Phe											
			595												
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Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Ser	Leu	Arg	Pro	Glu	Lys
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Asp	Gly	Ala	Ala	Thr	Gly	Met	Asp	Ala	Val	Cys	Leu	Tyr	His	Pro	Asn
			20				25						30		
Pro	Lys	Arg	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	Ser
			35				40						45		
Gln	Leu	Thr	His	Asn	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Ser	Leu	Asp	Arg
			50				55						60		
Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Gln	Asn	Ser	Val	Pro	Thr
			65				70						75		
Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Tyr	Trp	Ala	Thr	Thr	Gly	Thr
				85						90			95		
Pro	Ser	Ser	Phe	Pro	Gly	His	Thr	Glu	Pro	Gly	Pro	Leu	Leu	Ile	Pro
			100				105						110		
Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asn	Met
			115				120						125		
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<210> 80

<212> PRT

<213> Homo sapiens

<400> 80

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Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr
20 25 30

His Gln Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Ser Thr Val
35 40 45

Asp Leu Arg Thr Ser Gly Thr Pro Ser Ser Leu Ser Ser Pro Thr Ile
50 55 60

Met Ala Ala Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile
65 70 75 80

Thr Asn Leu Gln Tyr Glu Glu Asn Met Gly His Pro Gly Ser Arg Lys
85 90 95

Phe Asn Ile Met Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe
100 105 110

Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu
115 120 125

Leu Arg Pro Glu Lys Asn Gly Ala Ala Thr Gly Met Asp Ala Ile Cys
130 135 140

Ser His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu
145 150 155 160

Tyr Trp Glu Leu Ser Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro
165 170 175

Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg
180 185 190

Ser Ser Val Ala Pro Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu
195 200 205

Gly Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Thr Ala Val
210 215 220

Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Lys
225 230 235 240

Tyr Glu Glu Asp Met His Cys Pro Gly Ser Arg Lys Phe Asn Thr Thr
245 250 255

Glu Arg Val Leu Gln Ser Leu Phe Gly Pro Met Phe Lys Asn Thr Ser

260					265					270					
Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Ser	Glu
	275						280					285			
Lys	Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Leu
	290					295					300				
Asp	Pro	Lys	Ser	Leu	Gly	Val	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu
	305					310					315				320
Ser	Gln	Leu	Thr	Asn	Gly	Ile	Lys	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp
				325					330					335	
Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Gln	Thr	Ser	Ala	Pro
			340					345						350	
Asn	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly
		355					360					365			
Thr	Pro	Ser	Ser	Leu	Pro	Ser	Pro	Thr	Ser	Ala	Gly	Pro	Leu	Leu	Val
	370					375					380				
Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp
	385					390					395				400
Met	Arg	Arg	Thr	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Met	Glu	Ser	Val	Leu
				405					410					415	
Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro	Leu
			420					425					430		
Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Asp	Gly	Ala
		435					440					445			
Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Leu	Asp	Pro	Lys	Ser
	450					455					460				
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<210> 81

<211> 5465

<212> DNA

<213> Homo sapiens

<400> 81

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acagaggtag cataagacca gtcaaaggcc ctacagacatc cacttcgcct gccagtccta	180
aaggactaca cacaggaggg acaaaaagaa tggagaccac caccacagct ttgaagacca	240

				245				250				255			
Ser	Gly	Thr	Asp 260	Thr	Ser	Thr	Thr	Phe 265	Pro	Thr	Leu	Thr	Lys 270	Ser	Pro
His	Glu	Thr	Glu 275	Thr	Arg	Thr	Thr	Trp	Leu	Thr	His	Pro 285	Ala	Glu	Thr
Ser	Ser	Thr	Ile	Pro	Arg	Thr	Ile	Pro	Asn	Phe	Ser	His	His	Glu	Ser
Asp 305	Ala	Thr	Pro	Ser	Ile 310	Ala	Thr	Ser	Pro	Gly 315	Ala	Glu	Thr	Ser	Ser 320
Ala	Ile	Pro	Ile	Met 325	Thr	Val	Ser	Pro	Gly 330	Ala	Glu	Asp	Leu	Val	Thr
Ser	Gln	Val	Thr 340	Ser	Ser	Gly	Thr	Asp 345	Arg	Asn	Met	Thr	Ile 350	Pro	Thr
Leu	Thr	Leu	Ser 355	Pro	Gly	Glu	Pro 360	Lys	Thr	Ile	Ala	Ser 365	Leu	Val	Thr
His	Pro	Glu	Ala	Gln	Thr	Ser	Ser	Ala	Ile	Pro	Thr 380	Ser	Thr	Ile	Ser
Pro 385	Ala	Val	Ser	Arg	Leu 390	Val	Thr	Ser	Met	Val 395	Thr	Ser	Leu	Ala	Ala 400
Lys	Thr	Ser	Thr	Thr 405	Asn	Arg	Ala	Leu	Thr 410	Asn	Ser	Pro	Gly	Glu 415	Pro
Ala	Thr	Thr	Val 420	Ser	Leu	Val	Thr	His 425	Pro	Ala	Gln	Thr	Ser 430	Pro	Thr
Val	Pro	Trp 435	Thr	Thr	Ser	Ile	Phe 440	Phe	His	Ser	Lys	Ser 445	Asp	Thr	Thr
Pro	Ser	Met	Thr	Thr	Ser	His 455	Gly	Ala	Glu	Ser	Ser 460	Ser	Ala	Val	Pro
Thr 465	Pro	Thr	Val	Ser	Thr	Glu 470	Val	Pro	Gly	Val 475	Val	Thr	Pro	Leu	Val 480
Thr	Ser	Ser	Arg	Ala 485	Val	Ile	Ser	Thr	Thr 490	Ile	Pro	Ile	Leu	Thr 495	Leu
Ser	Pro	Gly	Glu 500	Pro	Glu	Thr	Thr	Pro 505	Ser	Met	Ala	Thr	Ser 510	His	Gly
Glu	Glu	Ala	Ser	Ser	Ala	Ile	Pro 520	Thr	Pro	Thr	Val	Ser 525	Pro	Gly	Val
Pro	Gly 530	Val	Val	Thr	Ser	Leu 535	Val	Thr	Ser	Ser	Arg 540	Ala	Val	Thr	Ser
Thr 545	Thr	Ile	Pro	Ile	Leu 550	Thr	Phe	Ser	Leu	Gly 555	Glu	Pro	Glu	Thr	Thr 560

Pro Ser Met Ala Thr Ser His Gly Thr Glu Ala Gly Ser Ala Val Pro
565 570 575

Thr Val Leu Pro Glu Val Pro Gly Met Val Thr Ser Leu Val Ala Ser
580 585 590

Ser Arg Ala Val Thr Ser Thr Thr Leu Pro Thr Leu Thr Leu Ser Pro
595 600 605

Gly Glu Pro Glu Thr Thr Pro Ser Met Ala Thr Ser His Gly Ala Glu
610 615 620

Ala Ser Ser Thr Val Pro Thr Val Ser Pro Glu Val Pro Gly Val Val
625 630 635 640

Thr Ser Leu Val Thr Ser Ser Ser Gly Val Asn Ser Thr Ser Ile Pro
645 650 655

Thr Leu Ile Leu Ser Pro Gly Glu Leu Glu Thr Thr Pro Ser Met Ala
660 665 670

Thr Ser His Gly Ala Glu Ala Ser Ser Ala Val Pro Thr Pro Thr Val
675 680 685

Ser Pro Gly Val Ser Gly Val Val Thr Pro Leu Val Thr Ser Ser Arg
690 695 700

Ala Val Thr Ser Thr Thr Ile Pro Ile Leu Thr Leu Ser Ser Ser Glu
705 710 715 720

Pro Glu Thr Thr Pro Ser Met Ala Thr Ser His Gly Val Glu Ala Ser
725 730 735

Ser Ala Val Leu Thr Val Ser Pro Glu Val Pro Gly Met Val Thr Ser
740 745 750

Leu Val Thr Ser Ser Arg Ala Val Thr Ser Thr Thr Ile Pro Thr Leu
755 760 765

Thr Ile Ser Ser Asp Glu Pro Glu Thr Thr Thr Ser Leu Val Thr His
770 775 780

Ser Glu Ala Lys Met Ile Ser Ala Ile Pro Thr Leu Ala Val Ser Pro
785 790 795 800

Thr Val Gln Gly Leu Val Thr Ser Leu Val Thr Ser Ser Gly Ser Glu
805 810 815

Thr Ser Ala Phe Ser Asn Leu Thr Val Ala Ser Ser Gln Pro Glu Thr
820 825 830

Ile Asp Ser Trp Val Ala His Pro Gly Thr Glu Ala Ser Ser Val Val
835 840 845

Pro Thr Leu Thr Val Ser Thr Gly Glu Pro Phe Thr Asn Ile Ser Leu
850 855 860

Val Thr His Pro Ala Glu Ser Ser Ser Thr Leu Pro Arg Thr Thr Ser
865 870 875 880

00066730 002704
102200 022300

Arg Phe Ser His Ser Glu Leu Asp Thr Met Pro Ser Thr Val Thr Ser
 885 890 895
 Pro Glu Ala Glu Ser Ser Ser Ala Ile Ser Thr Thr Ile Ser Pro Gly
 900 905 910
 Ile Pro Gly Val Leu Thr Ser Leu Val Thr Ser Ser Gly Arg Asp Ile
 915 920 925
 Ser Ala Thr Phe Pro Thr Val Pro Glu Ser Pro His Glu Ser Glu Ala
 930 935 940
 Thr Ala Ser Trp Val Thr His Pro Ala Val Thr Ser Thr Thr Val Pro
 945 950 955 960
 Arg Thr Thr Pro Asn Tyr Ser His Ser Glu Pro Asp Thr Thr Pro Ser
 965 970 975
 Ile Ala Thr Ser Pro Gly Ala Glu Ala Thr Ser Asp Phe Pro Thr Ile
 980 985 990
 Thr Val Ser Pro Asp Val Pro Asp Met Val Thr Ser Gln Val Thr Ser
 995 1000 1005
 Ser Gly Thr Asp Thr Ser Ile Thr Ile Pro Thr Leu Thr Leu Ser
 1010 1015 1020
 Ser Gly Glu Pro Glu Thr Thr Thr Ser Phe Ile Thr Tyr Ser Glu
 1025 1030 1035
 Thr His Thr Ser Ser Ala Ile Pro Thr Leu Pro Val Ser Pro Gly
 1040 1045 1050
 Ala Ser Lys Met Leu Thr Ser Leu Val Ile Ser Ser Gly Thr Asp
 1055 1060 1065
 Ser Thr Thr Thr Phe Pro Thr Leu Thr Glu Thr Pro Tyr Glu Pro
 1070 1075 1080
 Glu Thr Thr Ala Ile Gln Leu Ile His Pro Ala Glu Thr Asn Thr
 1085 1090 1095
 Met Val Pro Arg Thr Thr Pro Lys Phe Ser His Ser Lys Ser Asp
 1100 1105 1110
 Thr Thr Leu Pro Val Ala Ile Thr Ser Pro Gly Pro Glu Ala Ser
 1115 1120 1125
 Ser Ala Val Ser Thr Thr Thr Ile Ser Pro Asp Met Ser Asp Leu
 1130 1135 1140
 Val Thr Ser Leu Val Pro Ser Ser Gly Thr Asp Thr Ser Thr Thr
 1145 1150 1155
 Phe Pro Thr Leu Ser Glu Thr Pro Tyr Glu Pro Glu Thr Thr Ala
 1160 1165 1170
 Thr Trp Leu Thr His Pro Ala Glu Thr Ser Thr Thr Val Ser Gly

10266738 1026704
 1026680 1026690

1175		1180		1185
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Met Val Thr Ser Pro Gly	Val Asp Thr Arg Ser	Gly Val Pro Thr		
1205	1210	1215		
Thr Thr Ile Pro Pro Ser	Ile Pro Gly Val Val	Thr Ser Gln Val		
1220	1225	1230		
Thr Ser Ser Ala Thr Asp	Thr Ser Thr Ala Ile	Pro Thr Leu Thr		
1235	1240	1245		
Pro Ser Pro Gly Glu Pro	Glu Thr Thr Ala Ser	Ser Ala Thr His		
1250	1255	1260		
Pro Gly Thr Gln Thr Gly	Phe Thr Val Pro Ile	Arg Thr Val Pro		
1265	1270	1275		
Ser Ser Glu Pro Asp Thr	Met Ala Ser Trp Val	Thr His Pro Pro		
1280	1285	1290		
Gln Thr Ser Thr Pro Val	Ser Arg Thr Thr Ser	Ser Phe Ser His		
1295	1300	1305		
Ser Ser Pro Asp Ala Thr	Pro Val Met Ala Thr	Ser Pro Arg Thr		
1310	1315	1320		
Glu Ala Ser Ser Ala Val	Leu Thr Thr Ile Ser	Pro Gly Ala Pro		
1325	1330	1335		
Glu Met Val Thr Ser Gln	Ile Thr Ser Ser Gly	Ala Ala Thr Ser		
1340	1345	1350		
Thr Thr Val Pro Thr Leu	Thr His Ser Pro Gly	Met Pro Glu Thr		
1355	1360	1365		
Thr Ala Leu Leu Ser Thr	His Pro Arg Thr Glu	Thr Ser Lys Thr		
1370	1375	1380		
Phe Pro Ala Ser Thr Val	Phe Pro Gln Val Ser	Glu Thr Thr Ala		
1385	1390	1395		
Ser Leu Thr Ile Arg Pro	Gly Ala Glu Thr Ser	Thr Ala Leu Pro		
1400	1405	1410		
Thr Gln Thr Thr Ser Ser	Leu Phe Thr Leu Leu	Val Thr Gly Thr		
1415	1420	1425		
Ser Arg Val Asp Leu Ser	Pro Thr Ala Ser Pro	Gly Val Ser Ala		
1430	1435	1440		
Lys Thr Ala Pro Leu Ser	Thr His Pro Gly Thr	Glu Thr Ser Thr		
1445	1450	1455		
Met Ile Pro Thr Ser Thr	Leu Ser Leu Gly Leu	Leu Glu Thr Thr		
1460	1465	1470		

1175 1180 1185 1190 1195 1200 1205 1210 1215 1220 1225 1230 1235 1240 1245 1250 1255 1260 1265 1270 1275 1280 1285 1290 1295 1300 1305 1310 1315 1320 1325 1330 1335 1340 1345 1350 1355 1360 1365 1370 1375 1380 1385 1390 1395 1400 1405 1410 1415 1420 1425 1430 1435 1440 1445 1450 1455 1460 1465 1470

Gly	Leu	Leu	Ala	Thr	Ser	Ser	Ser	Ala	Glu	Thr	Ser	Thr	Ser	Thr
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Leu	Thr	Leu	Thr	Val	Ser	Pro	Ala	Val	Ser	Gly	Leu	Ser	Ser	Ala
1490						1495					1500			
Ser	Ile	Thr	Thr	Asp	Lys	Pro	Gln	Thr	Val	Thr	Ser	Trp	Asn	Thr
1505						1510					1515			
Glu	Thr	Ser	Pro	Ser	Val	Thr	Ser	Val	Gly	Pro	Pro	Glu	Phe	Ser
1520						1525					1530			
Arg	Thr	Val	Thr	Gly	Thr	Thr	Met	Thr	Leu	Ile	Pro	Ser	Glu	Met
1535						1540					1545			
Pro	Thr	Pro	Pro	Lys	Thr	Ser	His	Gly	Glu	Gly	Val	Ser	Pro	Thr
1550						1555					1560			
Thr	Ile	Leu	Arg	Thr	Thr	Met	Val	Glu	Ala	Thr	Asn	Leu	Ala	Thr
1565						1570					1575			
Thr	Gly	Ser	Ser	Pro	Thr	Val	Ala	Lys	Thr	Thr	Thr	Thr	Phe	Asn
1580						1585					1590			
Thr	Leu	Ala	Gly	Ser	Leu	Phe	Thr	Pro	Leu	Thr	Thr	Pro	Gly	Met
1595						1600					1605			
Ser	Thr	Leu	Ala	Ser	Glu	Ser	Val	Thr	Ser	Arg	Thr	Ser	Tyr	Asn
1610						1615					1620			
His	Arg	Ser	Trp	Ile	Ser	Thr	Thr	Ser	Ser	Tyr	Asn	Arg	Arg	Tyr
1625						1630					1635			
Trp	Thr	Pro	Ala	Thr	Ser	Thr	Pro	Val	Thr	Ser	Thr	Phe	Ser	Pro
1640						1645					1650			
Gly	Ile	Ser	Thr	Ser	Ser	Ile	Pro	Ser	Ser	Thr	Ala	Ala	Thr	Val
1655						1660					1665			
Pro	Phe	Met	Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu
1670						1675					1680			
Gln	Tyr	Glu	Glu	Asp	Met	Arg	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn
1685						1690					1695			
Ala	Thr	Glu	Arg	Glu	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Arg
1700						1705					1710			
Asn	Ser	Ser	Leu	Glu	Tyr	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Ala	Ser
1715						1720					1725			
Leu	Arg	Pro	Glu	Lys	Asp	Ser	Ser	Ala	Met	Ala	Val	Asp	Ala	Ile
1730						1735					1740			
Cys	Thr	His	Arg	Pro	Asp	Pro	Glu	Asp	Leu	Gly	Leu	Asp	Arg	Glu
1745						1750					1755			
Arg	Leu	Tyr	Trp	Glu	Leu	Ser	Asn	Leu	Thr	Asn	Gly	Ile	Gln	Glu
1760						1765					1770			

00055730 002701

cagctgacca atggcatcaa agagctgggc ccctacaccc tggacaggaa cagtctctat 360
 gtcaatggtt tcacccattg gatccctgtg cccaccagca gcactcctgg gacctccaca 420
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<210> 87

<211> 468

<212> DNA

<213> Homo sapiens

<400> 87
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 ctgaccttgc tcaggtccga gaaggatgga gcagccactg gagtggatgc catctgcacc 240
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 cagctgacca atggcatcaa agagctgggt ccctacaccc tggacagaaa cagtctctat 360
 gtcaatggtt tcacccatca gacctctgcg cccaacacca gcactcctgg gacctccaca 420
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<210> 88

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

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 cagctgacca atggcatcaa agagctgggt ccctacaccc tggacagaaa cagtctctat 360
 gtcaatggtt tcacccatca gacctctgcg cccaacacca gcactcctgg gacctccaca 420
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<210> 89

<211> 468

<212> DNA

<213> Homo sapiens

<400> 89
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<210> 90

<211> 468

<212> DNA

<213> Homo sapiens

<400> 90
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<210> 93

<211> 468

<212> DNA

<213> Homo sapiens

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 cagctgacca acagcattac cgaactggga ccctacaccc tggacagggga cagtctctat 360
 gtcaatgggt tcaaccctcg gagctctgtg ccaaccacca gcactcctgg gacctccaca 420
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<210> 94

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

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 gtcaatggtt tcacccatcn ganctctgng cccaccacca gcaactcctgg gacctccaca 420
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<210> 95

<211> 468

<212> DNA

<213> Homo sapiens

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 ctgaccttgc tcaggcctga gaagaatggg gcagccactg gaatggatgc catctgcagc 240
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 cagctgaccc atggcatcaa agagctgggc ccctacaccc tggacaggaa cagtctctat 360
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<210> 96

<211> 468

<212> DNA

<213> Homo sapiens

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 ggtctgcttg gtcccttggt caagaactcc agtgctggcc ctctgtactc tggctgcaga 180

ctgatctctc tcaggtctga gaaggatggg gcagccactg gagtggatgc catctgcacc 240
 caccacctta accctcaaag ccctggactg gacagggagc agctgtactg gcagctgagc 300
 cagatgacca atggcatcaa agagctgggc ccctacaccc tggaccggaa cagtctctac 360
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<210> 97

<211> 468

<212> DNA

<213> Homo sapiens

<400> 97
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 ggtctgctta gtcccatatt caagaactcc agtggtggcc ctctgtactc tggtctgcaga 180
 ctgacctctc tcaggcccga gaaggatggg gcagcaactg gaatggatgc tgtctgcctc 240
 taccacctta atccccaaag acctggactg gacagagagc agctgtactg ggagctaagc 300
 cagctgaccc acaacatcac tgagctgggc ccctacagcc tggacaggga cagtctctat 360
 gtcaatggtt tcacccatca gagctctatg acgaccacca gaactcctga tacctccaca 420
 atgcacctgg caacctcgag aactccagcc tcctgtctg gacctacg 468

<210> 98

<211> 474

<212> DNA

<213> Homo sapiens

<400> 98
 accgccagcc ctctcctggt gctattcaca atcaactgca ccatcaccaa cctgcagtac 60
 gaggaggaca tgcgtcgcac tggtccagg aagttcaaca ccatggagag tgtcctgcag 120
 ggtctgctca agcccttggt caagaacacc agtggtggcc ctctgtactc tggtctgcaga 180
 ttgaccttgc tcaggcccaa gaaagatggg gcagccactg gagtggatgc catctgcacc 240

0005730.052701

gcccctgtcc ctctcttgat accattcacc ctcaacttta ccatacacia cctgcattat 60

<210> 101

<212> DNA

<213> Homo sapiens

<210> 102

<211> 468

<212> DNA

<213> Homo sapiens

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<400> 102
gtgcctggcc ctctcctggt gccattcacc ctcaacttca ccatcaccaa cttgcagtat 60
gaggaggcca tgcgacaccc tggctccagg aagttcaata ccacggagag ggtcctacag 120
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<213> Homo sapiens

```
<210> 105
<211> 468
<212> DNA
<213> Homo sapiens
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<210> 106
<211> 468
<212> DNA
<213> Homo sapiens
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<400> 106

gcccctggcc ctctcctggt gccattcacc ctcaacttca ctatcaccaa cctgcagtat 60
gaggaggaca tgcgtcacco tggttccagg aagtccaaca ccacggagag agtcctgcag 120

<213> Homo sapiens

<400> 110
 actgctggcc ctctcctggg gccgttcacc ctcaacttca ccatcaccaa cctgaagtac 60
 gaggaggaca tgcattgccc tggctccagg aagttcaaca ccacagagag agtcctgcag 120
 agtctgcttg gtcccatgtt caagaacacc agtggtggcc ctctgtactc tggctgcaga 180
 ctgaccttgc tcaggccga gaaggatgga gcagccactg gagggatgc catctgcacc 240
 caccgtcttg accccaaaag ccctggagt gacagggagc agctatactg ggagctgagc 300
 cagctgacca atggcatcaa agagctgggt ccctacaccc tggacagaaa cagtctctat 360
 gtcaatgggt tcacccatca gacctctgcg cccaacacca gcaactctgg gacctccaca 420
 gtggaccttg ggacctcagg gactccatcc tccctcccca gccctaca 468

<210> 111

<211> 465

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(465)

<223> All N's = any nucleotide

<400> 111
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 gnggannaca tgcnnncncc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120
 ggtctgctnn nncctnttt caagaacncc agtgtnggcc ntctgtactc tggctgcaga 180
 ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc 240
 caccnncntr ancccaaaag ncctggactg nacagngagc ngctntactg ggagctnagc 300
 canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360
 gtcaatgggt tcacccattg gatccctgtg cccaccagca gcactcctgg gacctccaca 420
 gtggaccttg ggtcaggga cccatccctc cccccagcc ccaca 465

0055739.092701

<400> 113
 tctgctggcc ctctcctggt gccattcacc ctcaacttca ccatcaccaa cctgcagtac 60
 gaggaggaca tgcattacccc aggctccagg aagttcaaca ccacggagcg ggtcctgcag 120
 ggtctgcttg gtcccatggt caagaacacc agtgtcggcc ttctgtactc tggctgcaga 180
 ctgaccttgc tcaggcctga gaagaatggg gcaaccactg gaatggatgc catctgcacc 240
 caccgtcttg accccaaaag ccctggactg nacagnagc ngctntactg ggagctnagc 300
 canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360
 gtcaatgggt tcacccatcn ganctctgng cccaccacca gcaactcctgg gacctccaca 420
 gtgnacntng gnacctcngg gactccatcc tccntcccn gccncaca 468

<210> 114

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 114
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 gnggannaca tgcnnncccc nggntccagg aagttcaaca ccacngagag ggttctgcag 120
 ggtctgctca aacccttggt caggaatagc agtctggaat acctctattc aggctgcaga 180
 ctagcctcac tcaggccaga gaaggatagc tcagccatgg cagtggatgc catctgcaca 240
 catcgccctg accctgaaga cctcggactg gacagagagc gactgtactg ggagctgagc 300
 aatctgacaa atggcatcca ggagctgggc ccctacaccc tggaccggaa cagtctctat 360
 gtcaatgggt tcacccatcg aagctctatg cccaccacca gcaactcctgg gacctccaca 420
 gtggatgtgg gaacctcagg gactccatcc tccagcccca gccccacg 468

<210> 115

0005738.092764
 102360.82459660

<211> 468

<212> DNA

<213> Homo sapiens

<400> 115

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actgctggcc ctctcctgat accattcacc ctcaacttca ccatcaccaa cctgcagtat      60
ggggaggaca tgggtcaccc tggctccagg aagttcaaca ccacagagag ggtcctgcag      120
ggtctgcttg gtcccatatt caagaacacc agtggtggcc ctctgtactc tggctgcaga      180
ctgacctctc tcaggtctga gaaggatgga gcagccactg gagtggatgc catctgcac      240
catcatcttg accccaaaag ccctggactc aacagagagc ggctgtactg ggagctgagc      300
caactgacca atggcatcaa agagctgggc ccctacaccc tggacaggaa cagtctctat      360
gtcaatgggt tcacccatcg gacctctgtg cccaccacca gcaactcctgg gacctccaca      420
gtggaccttg gaacctcagg gactccattc tccctcccaa gccccgca      468
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<210> 116

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 116

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actgctggcc ctctcctggt gctgttcacc ctcaacttca ccatcaccaa cctgaagtat      60
gaggaggaca tgcctcgccc tggctccagg aagttcaaca ccactgagag ggtcctgcag      120
actctgcttg gtcctatggt caagaacacc agtggtggcc ttctgtactc tggctgcaga      180
ctgaccttgc tcaggtccga gaaggatgga gcagccactg gagtggatgc catctgcacc      240
caccgtcttg accccaaaag ccctggactg nacagnagc ngctntactg ggagctnagc      300
canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat      360
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118

ctgaccttgc tcagacctga gaagcaggag gcagccactg gagtggacac catctgtacc 240
 caccgcgttg atcccatcgg acctggactg gacagagagc ggctatactg ggagctgagc 300
 cagctgacca acagcatcac agagctggga ccctacaccc tggataggga cagtctctat 360
 gtcgatggct tcaacccttg gagctctgtg ccaaccacca gcactcctgg gacctccaca 420
 gtgcacctgg caacctctgg gactccatcc cccctgcctg gccacaca 468

<210> 119

<211> 468

<212> DNA

<213> Homo sapiens

<400> 119
 gccctgtcc ctctcttgat accattcacc ctcaacttta ccatcaccga cctgcattat 60
 gaagaaaaca tgcaacaccc tggttccagg aagttcaaca ccacggagag ggttctgcag 120
 ggtctgctca agcccttggt caagagcacc agcgttggcc ctctgtactc tggctgcaga 180
 ctgaccttgc tcagacctga gaaacatggg gcagccactg gagtggacgc catctgcacc 240
 ctccgccttg atcccaactgg tcctggactg gacagagagc ggctatactg ggagctgagc 300
 cagctgacca acagcatcac agagctggga ccctacaccc tggataggga cagtctctat 360
 gtcaatggct tcaacccttg gagctctgtg ccaaccacca gcactcctgg gacctccaca 420
 gtgcacctgg caacctctgg gactccatcc tccctgcctg gccacaca 468

<210> 120

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

00955730.092704

<210> 122

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 122

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gccccctggcc ctctcctggt gccattcacc ctcaacttca ctatcaccaa cctgcagtat      60
gaggaggaca tgcgtcaccc tggttccagg aagttcaaca ccacggagag agtcctgcag      120
ggtctgctca agcccttggt caagagcacc agtggtggcc ctctgtactc tggctgcaga      180
ctgaccttgc tcaggcctga aaaacgtggg gcagccaccg gcgtggacac catctgcact      240
caccgccttg accctctaaa ccctggactg nacagnagc ngctntactg ggagctnagc      300
canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat      360
gtcaatgggt tcacccatcn ganctctgng ccaccacca gactcctgg gacctccaca      420
gtgnacntng gnacctcngg gactccatcc tcctccccn gccncaca      468

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<210> 123

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 123

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ncnnetgncc ctctcctgnt nccnttcacc ntcaacttna ccatcaccaa cctgcantan      60
gnggannaca tgcnnncccc nggntccagg aagttcaaca ccacngagng ngtnctgcag      120
ggtctgctnn nccccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga      180
ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc      240
caccnncntn anccccaaaag ncctggactg nacagngagc ngctntactg ggagctnagc      300
canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat      360
gtcaatgggtt ttcaccctcg gagctctgtg ccaaccacca gcactcctgg gacctccaca      420
gtgcacctgg caacctctgg gactccatcc tcctgctg gccacaca                        468

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<210> 124

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 124

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gccccgtgcc ctctcttgat accattcacc ctcaacttta ccatcaccaa cctgcattat      60
gaagaaaaca tgcaacaccc tggttccagg aagttcaaca ccacggagcg ggtcctgcag      120
ggtctgcttg gtcccatggt caagaacaca agtgtcggcc ttctgtactc tggctgcaga      180
ctgaccttgc tcaggcctga gaagaatggg gcagccactg gaatggatgc catctgcagc      240
caccgtcttg accccaaaag ccctggactg nacagngagc ngctntactg ggagctnagc      300
canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat      360
gtcaatgggtt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca      420
gtgnachtng gnacctcngg gactccatcc tcctccccc gccncaca                        468

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<210> 125

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 125
 ncnnctgncc ctctcctgnt ncnttcacc ntcaacttna ccatcaccaa cctgcantan 60
 gnggannaca tgcnnncccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120
 ggtctgctnn nccccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga 180
 ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc 240
 caccnnctn ancccaaaag ncctggactg nacagngagc ngctntactg ggagctnagc 300
 canctgacca annncatcnn ngagctgggn ccctacacce tggacaggna cagtctctat 360
 gtcaatgggt tcacccatca gaactctgtg cccaccacca gtactcctgg gacctccaca 420
 gtgtactggg caaccactgg gactccatcc tccttccccg gccacaca 468

<210> 126

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 126
 gagcctggcc ctctcctgat accattcact ttcaacttta ccatcaccaa cctgcattat 60
 gaggaaaaca tgcaacaccc tggttccagg aagttcaaca ccacggagag ggttctgcag 120

ggtctgctca cgcccttggt caagaacacc agtgttggcc ctctgtactc tggctgcaga 180
 ctgaccttgc tcagacctga gaagcaggag gcagccactg gaggggacac catctgtacc 240
 caccgcgttg atcccatcgg acctggactg nacagnagac ngctntactg ggagctnagc 300
 canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360
 gtcaatgggt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca 420
 gtgnacntng gnacctcngg gactccatcc tcctccccc gccncaca 468

<210> 127

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 127

ncnctgncc ctctcctgnt nccttcacc ntcaacttna ccatcaccaa cctgcantan 60
 gnggannaca tgcnnncccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120
 ggtctgctnn nccccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga 180
 ctgacctnnc tcaggnccga gaagnatggn gcagccactg gantggatgc catctgcanc 240
 caccnncntn anccccaaaag ncctggactg nacagnagac ngctntactg ggagctnagc 300
 canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360
 gtcaatgggt tcacccatcg gagctctgtg ccaaccacca gcagtccctgg gacctccaca 420
 gtgcacctgg caacctctgg gactccatcc tcctgcctg gccacaca 468

<210> 128

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 128

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gcccctgtcc ctctcttgat accattcacc ctcaacttta ccatcaccaa cctgcattat      60
gaagaaaaca tgcaacaccc tggttccagg aagttcaaca ccacggagag ggttctgcag      120
ggtctgctca agcccttggt caagagcacc agtggtggcc ctctgtactc tggctgcaga      180
ctgaccttgc tcagacctga gaaacatggg gcagccactg gagtggacgc catctgcacc      240
ctccgccttg atcccactgg tcctggactg nacagnagac ngctntactg ggagctnagc      300
canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat      360
gtcaatgggt tcacccatcn ganctctgng cccaccacca gcaactctgg gacctccaca      420
gtgnacntng gnacctongg gactccatcc tcctccccn gccncaca      468

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<210> 129

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 129

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nennctgncc ctctctgnt nccnttcacc ntcaacttna ccatcaccaa cctgcantan      60
gnggannaca tgcnncccc nggntccagg aagttcaaca ccacngagng ngtnctgcag      120
ggtctgctnn nccccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga      180
ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc      240

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0005738-092704

$\langle 220 \rangle$

<223> All N's = any nucleotide

<213> Homo sapiens

<223> All N's = any nucleotide

<400>	132						
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gaggaggaca	tgcacgccc	tggatctagg	aagttcaacg	ccacagagag	ggtcctgcag		120
ggtctgctta	gtcccatatt	caagaacacc	agtgttggcc	ctctgtactc	tggctgcaga		180
ctgaccttgc	tcagacctga	gaagcaggag	gcagccactg	gagtggacac	catctgtacc		240
caccgcgttg	atcccatcgg	acctggactg	nacagngagc	ngctntactg	ggagctnagc		300
canctgacca	annncatcnn	ngagctgggn	ccctacaccc	tggacaggna	cagtctctat		360

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<210> 133
<211> 468
<212> DNA
<213> Homo sapiens
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<220>
<221> misc_feature
<222> (1)..(468)
<223> All N's = any nucleotide
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[illegible]

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<210> 134
<211> 468
<212> DNA
<213> Homo sapiens
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<220>  
<221>  misc_feature  
<222>  (1)..(468)
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<223> All N's = any nucleotide

<400> 134
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 gaggaggaca tgcacgccc tggctccagg aagttcaaca ccacggagag ggtccttcag 120
 ggtctgctta cgcccttggt caggaacacc agtgtcagct ctctgtactc tggttgcaga 180
 ctgaccttgc tcaggcctga gaaggatggg gcagccacca gagtggatgc tgtctgcacc 240
 catcgtcctg accccaaaag ccctggactg nacagngagc ngctntactg ggagctnagc 300
 canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360
 gtcaatgggt tcacccatcn ganctctgng cccaccacca gcaactcctgg gacctccaca 420
 gtgnacntng gnacctcngg gactccatcc tcntccccc gccncaca 468

<210> 135

<211> 465

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(465)

<223> All N's = any nucleotide

<400> 135
 ncnctgncc ctctcctgnt ncncttcacc ntcaacttna ccatcaccaa cctgcantan 60
 gnggannaca tgcnnncccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120
 ggtctgctnn nccccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga 180
 ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc 240
 caccnncntn ancccaaaag ncctggactg nacagngagc ngctntactg ggagctnagc 300
 canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360
 gtcaatgggt tcacccattg gatccctgtg cccaccagca gcaactcctgg gacctccaca 420
 gtggaccttg ggtcagggac tccatcctcc ctccccagcc ccaca 465

09065720 092704

<211> 468

<213> Homo sapiens

<221> misc feature

<222> (1) . . (468)

<223> All N's = any nucleotide

<400>	136						
actgctggcc	ctctcctggt	accattcacc	ctcaacttca	ccatcaccaa	cctgcagtat		60
ggggaggaca	tgggtcaccc	tggctccagg	aagttcaaca	ccacagagag	ggtcctgcag		120
ggtctgcttg	gtcccatatt	caagaacacc	agtgttggcc	ctctgtactc	tggctgcaga		180
ctgacctctc	tcagggtccga	gaaggatgga	gcagccactg	gagtggatgc	catctgcata		240
catcatcttg	accccaaaag	ccttggactg	nacagnnagc	ngctntactg	ggagctnagc		300
canctgacca	annncatcnn	ngagctgggn	ccctacaccc	tggacaggna	cagtctctat		360
gtcaatggtt	tcacccatcn	ganctctgng	cccaccacca	gcactcctgg	gacctccaca		420
gtgnacntng	gnacctcngg	gactccatcc	tcctcccccn	gccncaca			468

<211> 4 68

<213> Homo sapiens

<221> misc feature

<222> (1) . . (468)

<223> All N's = any nucleotide

<400> 137
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 gnggannaca tgcnnncccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120
 ggtctgctnn nccccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga 180
 ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc 240
 caccnnentn anccccaaaag ncctggactg nacagnagac ngctntactg ggagctnagc 300
 canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360
 gtcaatgggtt tcacccatca gacctttgcg cccaacacca gcactcctgg gacctccaca 420
 gtggaccttg ggacctcagg gactccatcc tccctcccca gccctaca 468

<210> 138

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 138
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 gaggaggaca tgcattaccc aggtccagg aagttcaaca ccacggagcg ggtcctgcag 120
 ggtctgcttg gtcccatggt caagaacacc agtgtcggcc ttctgtactc tggctgcaga 180
 ctgaccttgc tcaggcctga gaagaatggg gcagccacca gagtggatgc tgtctgcacc 240
 catcgtcctg accccaaaag ccctggactg nacagnagac ngctntactg ggagctnagc 300
 canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360
 gtcaatgggtt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca 420
 gtgnaentng gnacctcngg gactccatcc tccntcccn gccncaca 468

<210> 139

00055720.002701

<213> Homo sapiens

<222> (1) .. (468)

<223> All N's = any nucleotide

<400>	139						
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gnngannaca	tgcnncnccc	nggntccagg	aagttcaaca	ccacngagag	ggttctgcag		120
ggtctgctca	agcccttggt	caagagcacc	agtgttggcc	ctctgtattc	tggctgcaga		180
ctgaccttgc	tcaggcctga	gaaggacgga	gtagccacca	gagtggacgc	catctgcacc		240
caccgccctg	accccaaaat	ccctggggcta	gacagacagc	agctatactg	ggagctgagc		300
cagctgaccc	acagcatcac	tgagctggga	ccctacaccc	tggataggga	cagtctctat		360
gtcaatgggt	tcaccagcg	gagctctgtg	cccaccacca	gcactcctgg	gactttcaca		420
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<213> Homo sapiens

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catcgtcctg	accccaaaag	ccctggactg	gacagagagc	ggctgtactg	gaagctgagc		300
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caccaccctg	accccaaaag	ccttaggctg	gacagagagc	agctgtattg	ggagctgagc		300
cagctgaccc	acaatatcac	tgagctgggc	cactatgcc	tggacaacga	cagcctcttt		360
gtcaatgggt	tcactcatcg	gagctctgtg	tccaccacca	gcactcctgg	gacccccaca		420
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 <212> DNA
 <213> Homo sapiens

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 ctgctaaggc ccttggttcaa gaacaccagt gttggccctc tgtactctgg ctccaggctg 180
 accttgctca ggccagagaa agatggggaa gccaccggag tggatgccat ctgcacccac 240
 cgccctgacc ccacaggccc tgggctggac agagagcagc tgtatttgga gctgagccag 300
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<210> 144
 <211> 453
 <212> DNA
 <213> Homo sapiens

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 cacctgctca gtccctttgtt ccagaggagc agcctgggtg cacggtacac aggctgcagg 180
 gtcatcgcac taaggctctgt gaagaacggt gctgagacac ggggtggacct cctctgcacc 240
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 cagcagaccc atggcatcac ccggtctggc ccctactctc tggacaaaga cagcctctac 360
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<210> 145

<213> Homo sapiens

<213> Homo sapiens

<223> Any "X" = any amino acid

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			20					25					30		
Asn	Ala	Thr	Glu	Arg	Glu	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Arg
		35					40					45			
Asn	Ser	Ser	Leu	Glu	Tyr	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Ala	Ser	Leu
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Arg 65	Pro	Glu	Lys	Asp	Ser 70	Ser	Ala	Met	Ala	Val 75	Asp	Ala	Ile	Cys	Thr 80
His	Arg	Pro	Asp	Pro 85	Glu	Asp	Leu	Gly	Leu 90	Asp	Arg	Glu	Arg	Leu 95	Tyr
Trp	Glu	Leu	Ser 100	Asn	Leu	Thr	Asn	Gly 105	Ile	Gln	Glu	Leu	Gly 110	Pro	Tyr
Thr	Leu	Asp 115	Arg	Asn	Ser	Leu	Tyr 120	Val	Asn	Gly	Phe	Thr 125	His	Arg	Ser
Ser	Met 130	Pro	Thr	Thr	Ser	Thr 135	Pro	Gly	Thr	Ser	Thr 140	Val	Asp	Val	Gly
Thr 145	Ser	Gly	Thr	Pro 150	Ser	Ser	Ser	Pro	Ser	Pro 155	Thr	Ala	Ala	Gly	Pro 160
Leu	Leu	Met	Pro 165	Phe	Thr	Leu	Asn	Phe	Thr 170	Ile	Thr	Asn	Leu	Gln 175	Tyr
Glu	Glu	Asp	Met 180	Arg	Arg	Thr	Gly	Ser 185	Arg	Lys	Phe	Asn	Thr 190	Met	Glu
Ser	Val 195	Leu	Gln	Gly	Leu	Leu	Lys 200	Pro	Leu	Phe	Lys	Asn 205	Thr	Ser	Val
Gly 210	Pro	Leu	Tyr	Ser	Gly	Cys 215	Arg	Leu	Thr	Leu	Leu 220	Arg	Pro	Glu	Lys
Asp 225	Gly	Ala	Ala	Thr	Gly 230	Val	Asp	Ala	Ile	Cys 235	Thr	His	Arg	Leu	Asp 240
Pro	Lys	Ser	Pro	Gly 245	Leu	Asn	Arg	Glu	Gln 250	Leu	Tyr	Trp	Glu	Leu 255	Ser
Lys	Leu	Thr	Asn 260	Asp	Ile	Glu	Glu	Leu 265	Gly	Pro	Tyr	Thr	Leu 270	Asp	Arg
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Thr 290	Ser	Thr	Pro	Gly	Thr	Ser 295	Thr	Val	Asp	Leu	Arg 300	Thr	Ser	Gly	Thr
Pro 305	Ser	Ser	Leu	Ser 310	Ser	Pro	Thr	Ile	Met	Ala 315	Ala	Gly	Pro	Leu	Leu 320
Val	Pro	Phe	Thr	Leu 325	Asn	Phe	Thr	Ile	Thr 330	Asn	Leu	Gln	Tyr	Gly 335	Glu
Asp	Met	Gly	His 340	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu 350	Arg	Val
Leu	Gln 355	Gly	Leu	Leu	Gly	Pro	Ile 360	Phe	Lys	Asn	Thr 365	Ser	Val	Gly	Pro
Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Ser	Leu	Arg	Ser	Glu	Lys	Asp	Gly

370					375					380					
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Ser	Pro	Gly	Leu	Asn 405	Arg	Glu	Arg	Leu	Tyr 410	Trp	Glu	Leu	Ser	Gln 415	Leu
Thr	Asn	Gly	Ile 420	Lys	Glu	Leu	Gly	Pro 425	Tyr	Thr	Leu	Asp	Arg 430	Asn	Ser
Leu	Tyr	Val 435	Asn	Gly	Phe	Thr	His 440	Arg	Thr	Ser	Val	Pro 445	Thr	Ser	Ser
Thr 450	Pro	Gly	Thr	Ser	Thr	Val 455	Asp	Leu	Gly	Thr	Ser 460	Gly	Thr	Pro	Phe
Ser 465	Leu	Pro	Ser	Pro	Ala 470	Thr	Ala	Gly	Pro	Leu 475	Leu	Val	Leu	Phe	Thr 480
Leu	Asn	Phe	Thr	Ile 485	Thr	Asn	Leu	Lys	Tyr 490	Glu	Glu	Asp	Met	His 495	Arg
Pro	Gly	Ser	Arg 500	Lys	Phe	Asn	Thr	Thr 505	Glu	Arg	Val	Leu	Gln 510	Thr	Leu
Leu	Gly	Pro 515	Met	Phe	Lys	Asn 520	Thr	Ser	Val	Gly	Leu	Leu 525	Tyr	Ser	Gly
Cys 530	Arg	Leu	Thr	Leu	Leu	Arg 535	Ser	Glu	Lys	Asp	Gly 540	Ala	Ala	Thr	Gly
Val 545	Asp	Ala	Ile	Cys	Thr 550	His	Arg	Leu	Asp	Pro 555	Lys	Ser	Pro	Gly	Leu 560
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Lys	Glu	Leu	Gly 580	Pro	Tyr	Thr	Leu	Asp 585	Arg	Asn	Ser	Leu	Tyr 590	Val	Asn
Gly	Phe	Thr 595	His	Trp	Ile	Pro	Val 600	Pro	Thr	Ser	Ser	Thr 605	Pro	Gly	Thr
Ser 610	Thr	Val	Asp	Leu	Gly	Ser 615	Gly	Thr	Pro	Ser	Ser 620	Leu	Pro	Ser	Pro
Thr 625	Ala	Ala	Gly	Pro	Leu 630	Leu	Val	Pro	Phe	Thr 635	Leu	Asn	Phe	Thr	Ile 640
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Phe	Asn	Thr	Thr 660	Glu	Arg	Val	Leu	Gln 665	Gly	Leu	Leu	Gly	Pro 670	Met	Phe
Lys	Asn	Thr 675	Ser	Val	Gly	Leu	Leu 680	Tyr	Ser	Gly	Cys	Arg 685	Leu	Thr	Leu

Leu 690	Arg	Ser	Glu	Lys	Asp	Gly 695	Ala	Ala	Thr	Gly	Val 700	Asp	Ala	Ile	Cys
Thr 705	His	Arg	Leu	Asp	Pro 710	Lys	Ser	Pro	Gly	Val 715	Asp	Arg	Glu	Gln	Leu 720
Tyr	Trp	Glu	Leu	Ser 725	Gln	Leu	Thr	Asn	Gly 730	Ile	Lys	Glu	Leu	Gly 735	Pro
Tyr	Thr	Leu	Asp 740	Arg	Asn	Ser	Leu	Tyr 745	Val	Asn	Gly	Phe	Thr 750	His	Gln
Thr	Ser	Ala 755	Pro	Asn	Thr	Ser	Thr 760	Pro	Gly	Thr	Ser	Thr 765	Val	Asp	Leu
Gly 770	Thr	Ser	Gly	Thr	Pro	Ser 775	Ser	Leu	Pro	Ser	Pro 780	Thr	Ser	Ala	Gly
Pro 785	Leu	Leu	Val	Pro	Phe 790	Thr	Leu	Asn	Phe	Thr 795	Ile	Thr	Asn	Leu	Gln 800
Tyr	Glu	Glu	Asp	Met 805	Arg	His	Pro	Gly	Ser 810	Arg	Lys	Phe	Asn	Thr 815	Thr
Glu	Arg	Val	Leu 820	Gln	Gly	Leu	Leu	Lys 825	Pro	Leu	Phe	Lys	Ser 830	Thr	Ser
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Lys 850	Asp	Gly	Ala	Ala	Thr	Gly 855	Val	Asp	Ala	Ile	Cys 860	Thr	His	Arg	Leu
Asp 865	Pro	Lys	Ser	Pro	Gly 870	Val	Asp	Arg	Glu	Gln 875	Leu	Tyr	Trp	Glu	Leu 880
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Arg	Asn	Ser	Leu 900	Tyr	Val	Asn	Gly	Phe 905	Thr	His	Gln	Thr	Ser 910	Ala	Pro
Asn	Thr	Ser 915	Thr	Pro	Gly	Thr	Ser 920	Thr	Val	Asp	Leu	Gly 925	Thr	Ser	Gly
Thr 930	Pro	Ser	Ser	Leu	Pro	Ser 935	Pro	Thr	Ser	Ala	Gly 940	Pro	Leu	Leu	Val
Pro 945	Phe	Thr	Leu	Asn	Phe 950	Thr	Ile	Thr	Asn	Leu 955	Gln	Tyr	Glu	Glu	Asp 960
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Gln	Gly	Leu	Leu 980	Gly	Pro	Met	Phe	Lys 985	Asn	Thr	Ser	Val	Gly 990	Leu	Leu
Tyr	Ser	Gly 995	Cys	Arg	Leu	Thr	Leu 1000	Leu	Arg	Pro	Glu	Lys 1005	Asn	Gly	Ala

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Leu	Thr	His	Gly	Ile	Lys	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg
1040						1045					1050			
Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Val	Ala
1055						1060					1065			
Pro	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser
1070						1075					1080			
Gly	Thr	Pro	Ser	Ser	Leu	Pro	Ser	Pro	Thr	Thr	Ala	Val	Pro	Leu
1085						1090					1095			
Leu	Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr
1100						1105					1110			
Gly	Glu	Asp	Met	Arg	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr
1115						1120					1125			
Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Gly	Pro	Leu	Phe	Lys	Asn	Ser
1130						1135					1140			
Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Ile	Ser	Leu	Arg
1145						1150					1155			
Ser	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr
1160						1165					1170			
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1175						1180					1185			
Tyr	Trp	Gln	Leu	Ser	Gln	Met	Thr	Asn	Gly	Ile	Lys	Glu	Leu	Gly
1190						1195					1200			
Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr
1205						1210					1215			
His	Arg	Ser	Ser	Gly	Leu	Thr	Thr	Ser	Thr	Pro	Trp	Thr	Ser	Thr
1220						1225					1230			
Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Ser	Pro	Val	Pro	Ser	Pro
1235						1240					1245			
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1250						1255					1260			
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1265						1270					1275			
Arg	Lys	Phe	Asn	Ala	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Ser
1280						1285					1290			
Pro	Ile	Phe	Lys	Asn	Ser	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys

1010 1015 1020 1025 1030 1035 1040 1045 1050 1055 1060 1065 1070 1075 1080 1085 1090 1095 1100 1105 1110 1115 1120 1125 1130 1135 1140 1145 1150 1155 1160 1165 1170 1175 1180 1185 1190 1195 1200 1205 1210 1215 1220 1225 1230 1235 1240 1245 1250 1255 1260 1265 1270 1275 1280 1285 1290

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1610						1615					1620			
Leu	Leu	Arg	Pro	Glu	Lys	His	Glu	Ala	Ala	Thr	Gly	Val	Asp	Thr
1625						1630					1635			
Ile	Cys	Thr	His	Arg	Val	Asp	Pro	Ile	Gly	Pro	Gly	Leu	Asp	Arg
1640						1645					1650			
Glu	Arg	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	Asn	Ser	Ile	Thr
1655						1660					1665			
Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn
1670						1675					1680			
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1685						1690					1695			
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1700						1705					1710			
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1715						1720					1725			
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1730						1735					1740			
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1745						1750					1755			
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1760						1765					1770			
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1820						1825					1830			
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1835						1840					1845			
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1850						1855					1860			
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1865						1870					1875			
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Ser	Val	Gly	Leu	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg
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	1955					1960					1965			
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Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr
	1985					1990					1995			
His	Arg	Ser	Ser	Val	Ala	Pro	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr
	2000					2005					2010			
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	2015					2020					2025			
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	2150					2155					2160			
Thr	Pro	Trp	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro
	2165					2170					2175			
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	2495					2500					2505			
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	2660					2665					2670			
His	Tyr	Glu	Glu	Asn	Met	Gln	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn
	2675					2680					2685			
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Ser	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu
	2705					2710					2715			
Leu	Arg	Pro	Glu	Lys	His	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile
	2720					2725					2730			
Cys	Thr	Leu	Arg	Leu	Asp	Pro	Thr	Gly	Pro	Gly	Leu	Asp	Arg	Glu
	2735					2740					2745			
Arg	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	Asn	Ser	Val	Thr	Glu
	2750					2755					2760			
Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly
	2765					2770					2775			

Phe	Thr	Gln	Arg	Ser	Ser	Val	Pro	Thr	Thr	Ser	Ile	Pro	Gly	Thr
2780						2785					2790			
Ser	Ala	Val	His	Leu	Glu	Thr	Ser	Gly	Thr	Pro	Ala	Ser	Leu	Pro
2795						2800					2805			
Gly	His	Thr	Ala	Pro	Gly	Pro	Leu	Leu	Val	Pro	Phe	Thr	Leu	Asn
2810						2815					2820			
Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Val	Asp	Met	Arg	His	Pro
2825						2830					2835			
Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu
2840						2845					2850			
Leu	Lys	Pro	Leu	Phe	Lys	Ser	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser
2855						2860					2865			
Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Arg	Gly	Ala	Ala
2870						2875					2880			
Thr	Gly	Val	Asp	Thr	Ile	Cys	Thr	His	Arg	Leu	Asp	Pro	Leu	Asn
2885						2890					2895			
Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Lys	Leu
2900						2905					2910			
Thr	Arg	Gly	Ile	Ile	Glu	Leu	Gly	Pro	Tyr	Leu	Leu	Asp	Arg	Gly
2915						2920					2925			
Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Asn	Phe	Val	Pro	Ile
2930						2935					2940			
Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	His	Leu	Gly	Thr	Ser	Glu
2945						2950					2955			
Thr	Pro	Ser	Ser	Leu	Pro	Arg	Pro	Ile	Val	Pro	Gly	Pro	Leu	Leu
2960						2965					2970			
Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu
2975						2980					2985			
Glu	Ala	Met	Arg	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu
2990						2995					3000			
Arg	Val	Leu	Gln	Gly	Leu	Leu	Arg	Pro	Leu	Phe	Lys	Asn	Thr	Ser
3005						3010					3015			
Ile	Gly	Pro	Leu	Tyr	Ser	Ser	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro
3020						3025					3030			
Glu	Lys	Asp	Lys	Ala	Ala	Thr	Arg	Val	Asp	Ala	Ile	Cys	Thr	His
3035						3040					3045			
His	Pro	Asp	Pro	Gln	Ser	Pro	Gly	Leu	Asn	Arg	Glu	Gln	Leu	Tyr
3050						3055					3060			
Trp	Glu	Leu	Ser	Gln	Leu	Thr	His	Gly	Ile	Thr	Glu	Leu	Gly	Pro

3065	3070	3075
Tyr Thr Leu Asp Arg Asp Ser 3080	Leu Tyr Val Asp Ser 3085	Gly Phe Thr His 3090
Trp Ser Pro Ile Pro Thr Thr 3095	Ser Thr Pro Gly Thr 3100	Ser Ile Val 3105
Asn Leu Gly Thr Ser Gly Ile 3110	Pro Pro Ser Leu 3115	Pro Glu Thr Thr 3120
Xaa Xaa Xaa Pro Leu Leu Xaa 3125	Pro Phe Thr Leu 3130	Asn Phe Thr Ile 3135
Thr Asn Leu Xaa Tyr Glu Glu 3140	Xaa Met Xaa Xaa 3145	Pro Gly Ser Arg 3150
Lys Phe Asn Thr Thr Glu Arg 3155	Val Leu Gln Gly 3160	Leu Leu Lys Pro 3165
Leu Phe Arg Asn Ser Ser 3170	Leu Glu Tyr Leu Tyr 3175	Ser Gly Cys Arg 3180
Leu Ala Ser Leu Arg Pro Glu 3185	Lys Asp Ser Ser 3190	Ala Met Ala Val 3195
Asp Ala Ile Cys Thr His Arg 3200	Pro Asp Pro Glu 3205	Asp Leu Gly Leu 3210
Asp Arg Glu Arg Leu Tyr Trp 3215	Glu Leu Ser Asn 3220	Leu Thr Asn Gly 3225
Ile Gln Glu Leu Gly Pro Tyr 3230	Thr Leu Asp Arg 3235	Asn Ser Leu Tyr 3240
Val Asn Gly Phe Thr His Arg 3245	Ser Ser Phe Leu 3250	Thr Thr Ser Thr 3255
Pro Trp Thr Ser Thr Val Asp 3260	Leu Gly Thr Ser 3265	Gly Thr Pro Ser 3270
Pro Val Pro Ser Pro Thr Thr 3275	Ala Gly Pro Leu 3280	Leu Val Pro Phe 3285
Thr Leu Asn Phe Thr Ile Thr 3290	Asn Leu Gln Tyr 3295	Glu Glu Asp Met 3300
His Arg Pro Gly Ser Arg Arg 3305	Phe Asn Thr Thr 3310	Glu Arg Val Leu 3315
Gln Gly Leu Leu Thr Pro Leu 3320	Phe Lys Asn Thr 3325	Ser Val Gly Pro 3330
Leu Tyr Ser Gly Cys Arg Leu 3335	Thr Leu Leu Arg 3340	Pro Glu Lys Gln 3345
Glu Ala Ala Thr Gly Val Asp 3350	Thr Ile Cys Thr 3355	His Arg Val Asp 3360

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Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu
 3365 3370 3375
 Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu
 3380 3385 3390
 Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Trp Ser Ser
 3395 3400 3405
 Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala
 3410 3415 3420
 Thr Ser Gly Thr Pro Ser Ser Leu Pro Gly His Thr Ala Pro Val
 3425 3430 3435
 Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr Asp Leu
 3440 3445 3450
 His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe Asn
 3455 3460 3465
 Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys
 3470 3475 3480
 Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu
 3485 3490 3495
 Leu Arg Pro Glu Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile
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 Cys Thr Leu Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu
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 Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser Val Thr Glu
 3530 3535 3540
 Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly
 3545 3550 3555
 Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr
 3560 3565 3570
 Ser Ala Val His Leu Glu Thr Ser Gly Thr Pro Ala Ser Leu Pro
 3575 3580 3585
 Gly His Thr Ala Pro Gly Pro Leu Leu Val Pro Phe Thr Leu Asn
 3590 3595 3600
 Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro
 3605 3610 3615
 Gly Ser Arg Lys Phe Ser Thr Thr Glu Arg Val Leu Gln Gly Leu
 3620 3625 3630
 Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser
 3635 3640 3645
 Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala Ala
 3650 3655 3660

Thr Arg Val Asp Ala Val Cys Thr His Arg Pro Asp Pro Lys Ser
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 Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln Leu
 3680 3685 3690
 Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg His
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 Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser Ser Met Thr Thr
 3710 3715 3720
 Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg
 3725 3730 3735
 Thr Pro Ala Ser Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu
 3740 3745 3750
 Val Leu Phe Thr Ile Asn Phe Thr Ile Thr Asn Gln Arg Tyr Glu
 3755 3760 3765
 Glu Asn Met His His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu
 3770 3775 3780
 Arg Val Leu Gln Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser
 3785 3790 3795
 Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro
 3800 3805 3810
 Lys Lys Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr
 3815 3820 3825
 Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr
 3830 3835 3840
 Trp Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro
 3845 3850 3855
 Tyr Thr Gln Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His
 3860 3865 3870
 Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Ser Ala Val
 3875 3880 3885
 His Leu Glu Thr Ser Gly Thr Pro Ala Ser Leu Pro Gly His Thr
 3890 3895 3900
 Ala Pro Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile
 3905 3910 3915
 Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg
 3920 3925 3930
 Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys Pro
 3935 3940 3945
 Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg

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Leu Thr	Leu Leu	Arg Pro	Glu	Lys Arg	Gly Ala	Ala	Thr Gly	Val						
3965			3970			3975								
Asp Thr	Ile Cys	Thr His	Arg	Leu Asp	Pro Leu	Asn	Pro Gly	Leu						
3980			3985			3990								
Asp Arg	Glu Gln	Leu Tyr	Trp	Glu Leu	Ser Lys	Leu	Thr Arg	Gly						
3995			4000			4005								
Ile Ile	Glu Leu	Gly Pro	Tyr	Leu Leu	Asp Arg	Gly	Ser Leu	Tyr						
4010			4015			4020								
Val Asn	Gly Phe	Thr His	Arg	Thr Ser	Val Pro	Thr	Thr Ser	Thr						
4025			4030			4035								
Pro Gly	Thr Ser	Thr Val	Asp	Leu Gly	Thr Ser	Gly	Thr Pro	Phe						
4040			4045			4050								
Ser Leu	Pro Ser	Pro Ala	Xaa	Xaa Xaa	Pro Leu	Leu	Xaa Pro	Phe						
4055			4060			4065								
Thr Leu	Asn Phe	Thr Ile	Thr	Asn Leu	Xaa Tyr	Glu	Glu Xaa	Met						
4070			4075			4080								
Xaa Xaa	Pro Gly	Ser Arg	Lys	Phe Asn	Thr Thr	Glu	Arg Val	Leu						
4085			4090			4095								
Gln Thr	Leu Leu	Gly Pro	Met	Phe Lys	Asn Thr	Ser	Val Gly	Leu						
4100			4105			4110								
Leu Tyr	Ser Gly	Cys Arg	Leu	Thr Leu	Leu Arg	Ser	Glu Lys	Asp						
4115			4120			4125								
Gly Ala	Ala Thr	Gly Val	Asp	Ala Ile	Cys Thr	His	Arg Leu	Asp						
4130			4135			4140								
Pro Lys	Ser Pro	Gly Val	Asp	Arg Glu	Gln Leu	Tyr	Trp Glu	Leu						
4145			4150			4155								
Ser Gln	Leu Thr	Asn Gly	Ile	Lys Glu	Leu Gly	Pro	Tyr Thr	Leu						
4160			4165			4170								
Asp Arg	Asn Ser	Leu Tyr	Val	Asn Gly	Phe Thr	His	Trp Ile	Pro						
4175			4180			4185								
Val Pro	Thr Ser	Ser Thr	Pro	Gly Thr	Ser Thr	Val	Asp Leu	Gly						
4190			4195			4200								
Ser Gly	Thr Pro	Ser Leu	Pro	Ser Ser	Pro Thr	Thr	Ala Gly	Pro						
4205			4210			4215								
Leu Leu	Val Pro	Phe Thr	Leu	Asn Phe	Thr Ile	Thr	Asn Leu	Lys						
4220			4225			4230								
Tyr Glu	Glu Asp	Met His	Cys	Pro Gly	Ser Arg	Lys	Phe Asn	Thr						
4235			4240			4245								

Thr	Glu	Arg	Val	Leu	Gln	Ser	Leu	Leu	Gly	Pro	Met	Phe	Lys	Asn
4250						4255					4260			
Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu
4265						4270					4275			
Arg	Ser	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys
4280						4285					4290			
Thr	His	Arg	Leu	Asp	Pro	Lys	Ser	Pro	Gly	Val	Asp	Arg	Glu	Gln
4295						4300					4305			
Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	Asn	Gly	Ile	Lys	Glu	Leu
4310						4315					4320			
Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe
4325						4330					4335			
Thr	His	Gln	Thr	Ser	Ala	Pro	Asn	Thr	Ser	Thr	Pro	Gly	Thr	Ser
4340						4345					4350			
Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu	Pro	Ser
4355						4360					4365			
Pro	Thr	Xaa	Xaa	Xaa	Pro	Leu	Leu	Xaa	Pro	Phe	Thr	Leu	Asn	Phe
4370						4375					4380			
Thr	Ile	Thr	Asn	Leu	Xaa	Tyr	Glu	Glu	Xaa	Met	Xaa	Xaa	Pro	Gly
4385						4390					4395			
Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu
4400						4405					4410			
Xaa	Pro	Xaa	Phe	Lys	Xaa	Thr	Ser	Val	Gly	Xaa	Leu	Tyr	Ser	Gly
4415						4420					4425			
Cys	Arg	Leu	Thr	Leu	Leu	Arg	Xaa	Glu	Lys	Xaa	Xaa	Ala	Ala	Thr
4430						4435					4440			
Xaa	Val	Asp	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Asp	Pro	Xaa	Xaa	Pro
4445						4450					4455			
Gly	Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa	Leu	Thr
4460						4465					4470			
Xaa	Xaa	Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Xaa	Leu	Asp	Arg	Xaa	Ser
4475						4480					4485			
Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Trp	Ile	Pro	Val	Pro	Thr	Ser
4490						4495					4500			
Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Gly	Ser	Gly	Thr	Pro
4505						4510					4515			
Ser	Ser	Leu	Pro	Ser	Pro	Thr	Thr	Ala	Gly	Pro	Leu	Leu	Val	Pro
4520						4525					4530			
Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Lys	Tyr	Glu	Glu	Asp
4535						4540					4545			

Met	His	Cys	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val
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Leu	Gln	Ser	Leu	Leu	Gly	Pro	Met	Phe	Lys	Asn	Thr	Ser	Val	Gly
4565						4570					4575			
Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Ser	Leu	Arg	Ser	Glu	Lys
4580						4585					4590			
Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Val
4595						4600					4605			
Asp	Pro	Lys	Ser	Pro	Gly	Val	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu
4610						4615					4620			
Leu	Ser	Gln	Leu	Thr	Asn	Gly	Ile	Lys	Glu	Leu	Gly	Pro	Tyr	Thr
4625						4630					4635			
Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Gln	Thr
4640						4645					4650			
Ser	Ala	Pro	Asn	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu
4655						4660					4665			
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4670						4675					4680			
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4685						4690					4695			
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Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Gly	Pro	Met	Phe
4715						4720					4725			
Lys	Asn	Thr	Ser	Val	Gly	Leu	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr
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4745						4750					4755			
Ile	Cys	Thr	His	Arg	Leu	Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asp	Arg
4760						4765					4770			
Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa	Leu	Thr	Xaa	Xaa	Ile	Xaa
4775						4780					4785			
Glu	Leu	Gly	Pro	Tyr	Xaa	Leu	Asp	Arg	Xaa	Ser	Leu	Tyr	Val	Asn
4790						4795					4800			
Gly	Phe	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Thr	Ser	Thr	Pro	Gly
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Thr	Ser	Xaa	Val	Xaa	Leu	Xaa	Thr	Ser	Gly	Thr	Pro	Xaa	Xaa	Xaa
4820						4825					4830			
Pro	Xaa	Xaa	Thr	Xaa	Xaa	Xaa	Pro	Leu	Leu	Xaa	Pro	Phe	Thr	Leu

4835					4840					4845				
Asn	Phe	Thr	Ile	Thr	Asn	Leu	Xaa	Tyr	Glu	Glu	Xaa	Met	Xaa	Xaa
4850					4855					4860				
Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly
4865					4870					4875				
Leu	Leu	Lys	Pro	Leu	Phe	Arg	Asn	Ser	Ser	Leu	Glu	Tyr	Leu	Tyr
4880					4885					4890				
Ser	Gly	Cys	Arg	Leu	Ala	Ser	Leu	Arg	Pro	Glu	Lys	Asp	Ser	Ser
4895					4900					4905				
Ala	Met	Ala	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Pro	Asp	Pro	Glu
4910					4915					4920				
Asp	Leu	Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr	Trp	Glu	Leu	Ser	Asn
4925					4930					4935				
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His	His	Leu	Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asn	Arg	Glu	Arg	Leu
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Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	Asn	Gly	Ile	Lys	Glu	Leu	Gly
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His	Arg	Thr	Ser	Val	Pro	Thr	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr
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Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Phe	Ser	Leu	Pro	Ser	Pro
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Ile	Thr	Asn	Leu	Lys	Tyr	Glu	Glu	Asp	Met	His	Arg	Pro	Gly	Ser
	5165					5170					5175			
Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Thr	Leu	Leu	Gly
	5180					5185					5190			
Pro	Met	Phe	Lys	Asn	Thr	Ser	Val	Gly	Leu	Leu	Tyr	Ser	Gly	Cys
	5195					5200					5205			
Arg	Leu	Thr	Leu	Leu	Arg	Ser	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly
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Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Leu	Asp	Pro	Lys	Ser	Pro	Gly
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	5255					5260					5265			
Tyr	Val	Asn	Gly	Phe	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Thr	Ser
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Thr	Pro	Gly	Thr	Ser	Xaa	Val	Xaa	Leu	Xaa	Thr	Ser	Gly	Thr	Pro
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Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Xaa	Tyr	Glu	Glu	Xaa
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Leu	Gln	Gly	Leu	Leu	Arg	Pro	Val	Phe	Lys	Asn	Thr	Ser	Val	Gly
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	5360					5365					5370			
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	5375					5380					5385			
Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu
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Leu	Ser	Gln	Leu	Thr	His	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr
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Gln	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser
	5420					5425					5430			

Ser	Val	Pro	Thr	Thr	Ser	Ile	Pro	Gly	Thr	Ser	Ala	Val	His	Leu
	5435					5440					5445			
Glu	Thr	Thr	Gly	Thr	Pro	Ser	Ser	Phe	Pro	Gly	His	Thr	Glu	Pro
	5450					5455					5460			
Gly	Pro	Leu	Leu	Ile	Pro	Phe	Thr	Phe	Asn	Phe	Thr	Ile	Thr	Asn
	5465					5470					5475			
Leu	Arg	Tyr	Glu	Glu	Asn	Met	Gln	His	Pro	Gly	Ser	Arg	Lys	Phe
	5480					5485					5490			
Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Thr	Pro	Leu	Phe
	5495					5500					5505			
Lys	Asn	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr
	5510					5515					5520			
Leu	Leu	Arg	Pro	Glu	Lys	Gln	Glu	Ala	Ala	Thr	Gly	Val	Asp	Thr
	5525					5530					5535			
Ile	Cys	Thr	His	Arg	Val	Asp	Pro	Ile	Gly	Pro	Gly	Leu	Asp	Arg
	5540					5545					5550			
Glu	Arg	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	Asn	Ser	Ile	Thr
	5555					5560					5565			
Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asp
	5570					5575					5580			
Gly	Phe	Asn	Pro	Trp	Ser	Ser	Val	Pro	Thr	Thr	Ser	Thr	Pro	Gly
	5585					5590					5595			
Thr	Ser	Thr	Val	His	Leu	Ala	Thr	Ser	Gly	Thr	Pro	Ser	Pro	Leu
	5600					5605					5610			
Pro	Gly	His	Thr	Ala	Pro	Val	Pro	Leu	Leu	Ile	Pro	Phe	Thr	Leu
	5615					5620					5625			
Asn	Phe	Thr	Ile	Thr	Asp	Leu	His	Tyr	Glu	Glu	Asn	Met	Gln	His
	5630					5635					5640			
Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly
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Leu	Leu	Lys	Pro	Leu	Phe	Lys	Ser	Thr	Ser	Val	Gly	Pro	Leu	Tyr
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Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	His	Gly	Ala
	5675					5680					5685			
Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	Leu	Arg	Leu	Asp	Pro	Thr
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Gly	Pro	Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr	Trp	Glu	Leu	Ser	Gln
	5705					5710					5715			
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 6170 6175 6180
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 6335 6340 6345
 Glu Leu Gly Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu Tyr Val Asn
 6350 6355 6360
 Gly Phe His Pro Arg Ser Ser Val Pro Thr Thr Ser Thr Pro Gly
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 6470 6475 6480
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 Glu Glu Xaa Met Xaa Xaa Pro Gly Ser Arg Lys Phe Asn Thr Thr
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Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly
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 7220 7225 7230
 Ser Gly Cys Arg Leu Thr Leu Leu Arg Xaa Glu Lys Xaa Xaa Ala
 7235 7240 7245
 Ala Thr Xaa Val Asp Xaa Xaa Cys Xaa Xaa Xaa Xaa Asp Pro Xaa
 7250 7255 7260
 Xaa Pro Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa
 7265 7270 7275
 Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa Leu Asp Arg
 7280 7285 7290
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 7295 7300 7305
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 Gly Thr Pro Ser Ser Leu Pro Gly His Thr Ala Pro Val Pro Leu
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 Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr
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 7355 7360 7365
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 7370 7375 7380
 Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg
 7385 7390 7395
 Pro Glu Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu
 7400 7405 7410
 Tyr His Pro Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu
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 Tyr Cys Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly
 7430 7435 7440
 Pro Tyr Ser Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr
 7445 7450 7455
 His Gln Asn Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr
 7460 7465 7470
 Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser Phe Pro Gly His
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 Thr Xaa Xaa Xaa Pro Leu Leu Xaa Pro Phe Thr Leu Asn Phe Thr

7490		7495		7500
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Pro Xaa Phe Lys Xaa Thr Ser 7535	Val Gly Xaa Leu Tyr 7540	Ser Gly Cys 7545		
Arg Leu Thr Leu Leu Arg Xaa 7550	Glu Lys Xaa Xaa Ala 7555	Ala Thr Xaa 7560		
Val Asp Xaa Xaa Cys Xaa Xaa 7565	Xaa Xaa Asp Pro Xaa 7570	Xaa Pro Gly 7575		
Leu Asp Arg Glu Xaa Leu Tyr 7580	Trp Glu Leu Ser Xaa 7585	Leu Thr Xaa 7590		
Xaa Ile Xaa Glu Leu Gly Pro 7595	Tyr Xaa Leu Asp Arg 7600	Xaa Ser Leu 7605		
Tyr Val Asn Gly Phe Thr His 7610	Trp Ser Ser Gly Leu 7615	Thr Thr Ser 7620		
Thr Pro Trp Thr Ser Thr Val 7625	Asp Leu Gly Thr Ser 7630	Gly Thr Pro 7635		
Ser Pro Val Pro Ser Pro Thr 7640	Thr Ala Gly Pro Leu 7645	Leu Val Pro 7650		
Phe Thr Leu Asn Phe Thr Ile 7655	Thr Asn Leu Gln Tyr 7660	Glu Glu Asp 7665		
Met His Arg Pro Gly Ser Arg 7670	Lys Phe Asn Ala Thr 7675	Glu Arg Val 7680		
Leu Gln Gly Leu Leu Ser Pro 7685	Ile Phe Lys Asn Thr 7690	Ser Val Gly 7695		
Pro Leu Tyr Ser Gly Cys Arg 7700	Leu Thr Leu Leu Arg 7705	Pro Glu Lys 7710		
Gln Glu Ala Ala Thr Gly Val 7715	Asp Thr Ile Cys Thr 7720	His Arg Val 7725		
Asp Pro Ile Gly Pro Gly Leu 7730	Asp Arg Glu Xaa Leu 7735	Tyr Trp Glu 7740		
Leu Ser Xaa Leu Thr Xaa Xaa 7745	Ile Xaa Glu Leu Gly 7750	Pro Tyr Xaa 7755		
Leu Asp Arg Xaa Ser Leu Tyr 7760	Val Asn Gly Phe Xaa 7765	Xaa Xaa Xaa 7770		
Xaa Xaa Xaa Xaa Thr Ser Thr 7775	Pro Gly Thr Ser Xaa 7780	Val Xaa Leu 7785		

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Xaa Thr 8090	Ser Thr Pro Gly Thr 8095	Ser Xaa Val Xaa Leu 8100	Xaa Thr Ser
Gly Thr 8105	Pro Xaa Xaa Xaa Pro 8110	Xaa Xaa Thr Xaa Xaa 8115	Xaa Pro Leu
Leu Xaa 8120	Pro Phe Thr Leu Asn 8125	Phe Thr Ile Thr Asn 8130	Leu Xaa Tyr
Glu Glu 8135	Xaa Met Xaa Xaa Pro 8140	Gly Ser Arg Lys Phe 8145	Asn Thr Thr
Glu Arg 8150	Val Leu Gln Gly Leu 8155	Leu Xaa Pro Xaa Phe 8160	Lys Xaa Thr
Ser Val 8165	Gly Xaa Leu Tyr Ser 8170	Gly Cys Arg Leu Thr 8175	Leu Leu Arg
Xaa Glu 8180	Lys Xaa Xaa Ala Ala 8185	Thr Xaa Val Asp Xaa 8190	Xaa Cys Xaa
Xaa Xaa 8195	Xaa Asp Pro Xaa Xaa 8200	Pro Gly Leu Asp Arg 8205	Glu Xaa Leu
Tyr Trp 8210	Glu Leu Ser Xaa Leu 8215	Thr Xaa Xaa Ile Xaa 8220	Glu Leu Gly
Pro Tyr 8225	Xaa Leu Asp Arg Xaa 8230	Ser Leu Tyr Val Asn 8235	Gly Phe Thr
His Trp 8240	Ile Pro Val Pro Thr 8245	Ser Ser Thr Pro Gly 8250	Thr Ser Thr
Val Asp 8255	Leu Gly Ser Gly Thr 8260	Pro Ser Ser Leu Pro 8265	Ser Pro Thr
Thr Ala 8270	Gly Pro Leu Leu Val 8275	Pro Phe Thr Leu Asn 8280	Phe Thr Ile
Thr Asn 8285	Leu Gln Tyr Gly Glu 8290	Asp Met Gly His Pro 8295	Gly Ser Arg
Lys Phe 8300	Asn Thr Thr Glu Arg 8305	Val Leu Gln Gly Leu 8310	Leu Gly Pro
Ile Phe 8315	Lys Asn Thr Ser Val 8320	Gly Pro Leu Tyr Ser 8325	Gly Cys Arg
Leu Thr 8330	Ser Leu Arg Ser Glu 8335	Lys Asp Gly Ala Ala 8340	Thr Gly Val
Asp Ala 8345	Ile Cys Ile His His 8350	Leu Asp Pro Lys Ser 8355	Pro Gly Leu
Asp Arg 8360	Glu Xaa Leu Tyr Trp 8365	Glu Leu Ser Xaa Leu 8370	Thr Xaa Xaa
Ile Xaa	Glu Leu Gly Pro Tyr	Xaa Leu Asp Arg Xaa	Ser Leu Tyr

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Val Asn Gly Phe Xaa Xaa 8390	Xaa Xaa Xaa Xaa Xaa 8395	Xaa Thr Ser Thr 8400
Pro Gly Thr Ser Xaa Val 8405	Xaa Leu Xaa Thr Ser 8410	Gly Thr Pro Xaa 8415
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Thr Leu Asn Phe Thr Ile 8435	Thr Asn Leu Xaa Tyr 8440	Glu Glu Xaa Met 8445
Xaa Xaa Pro Gly Ser Arg 8450	Lys Phe Asn Thr Thr 8455	Glu Arg Val Leu 8460
Gln Gly Leu Leu Xaa Pro 8465	Xaa Phe Lys Xaa Thr 8470	Ser Val Gly Xaa 8475
Leu Tyr Ser Gly Cys Arg 8480	Leu Thr Leu Leu Arg 8485	Xaa Glu Lys Xaa 8490
Xaa Ala Ala Thr Xaa Val 8495	Asp Xaa Xaa Cys Xaa 8500	Xaa Xaa Xaa Asp 8505
Pro Xaa Xaa Pro Gly Leu 8510	Asp Arg Glu Xaa Leu 8515	Tyr Trp Glu Leu 8520
Ser Xaa Leu Thr Xaa Xaa 8525	Ile Xaa Glu Leu Gly 8530	Pro Tyr Xaa Leu 8535
Asp Arg Xaa Ser Leu Tyr 8540	Val Asn Gly Phe Thr 8545	His Gln Thr Phe 8550
Ala Pro Asn Thr Ser Thr 8555	Pro Gly Thr Ser Thr 8560	Val Asp Leu Gly 8565
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Pro Leu Leu Val Pro Phe 8585	Thr Leu Asn Phe Thr 8590	Ile Thr Asn Leu 8595
Gln Tyr Glu Glu Asp Met 8600	His His Pro Gly Ser 8605	Arg Lys Phe Asn 8610
Thr Thr Glu Arg Val Leu 8615	Gln Gly Leu Leu Gly 8620	Pro Met Phe Lys 8625
Asn Thr Ser Val Gly Leu 8630	Leu Tyr Ser Gly Cys 8635	Arg Leu Thr Leu 8640
Leu Arg Pro Glu Lys Asn 8645	Gly Ala Ala Thr Arg 8650	Val Asp Ala Val 8655
Cys Thr His Arg Pro Asp 8660	Pro Lys Ser Pro Gly 8665	Leu Asp Arg Glu 8670

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 9995 10000

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Trp	Lys	Leu	Ser	Gln	Leu	Thr	His	Gly	Ile	Thr	Glu	Leu	Gly	Pro
	8990					8995					9000			
Tyr	Thr	Leu	Asp	Arg	His	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His
	9005					9010					9015			
Gln	Ser	Ser	Met	Thr	Thr	Thr	Arg	Thr	Pro	Asp	Thr	Ser	Thr	Met
	9020					9025					9030			
His	Leu	Ala	Thr	Ser	Arg	Thr	Pro	Ala	Ser	Leu	Ser	Gly	Pro	Thr
	9035					9040					9045			
Thr	Ala	Ser	Pro	Leu	Leu	Val	Leu	Phe	Thr	Ile	Asn	Phe	Thr	Ile
	9050					9055					9060			
Thr	Asn	Leu	Arg	Tyr	Glu	Glu	Asn	Met	His	His	Pro	Gly	Ser	Arg
	9065					9070					9075			
Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Arg	Pro
	9080					9085					9090			
Val	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg
	9095					9100					9105			
Leu	Thr	Leu	Leu	Arg	Pro	Lys	Lys	Asp	Gly	Ala	Ala	Thr	Lys	Val
	9110					9115					9120			
Asp	Ala	Ile	Cys	Thr	Tyr	Arg	Pro	Asp	Pro	Lys	Ser	Pro	Gly	Leu
	9125					9130					9135			
Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	His	Ser
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Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Gln	Asp	Arg	Asp	Ser	Leu	Tyr
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Pro	Gly	Thr	Pro	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Val
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Ser	Lys	Pro	Gly	Pro	Ser	Ala	Ala	Ser	Pro	Leu	Leu	Val	Leu	Phe
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Thr	Leu	Asn	Gly	Thr	Ile	Thr	Asn	Leu	Arg	Tyr	Glu	Glu	Asn	Met
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Ser	Gln	Leu	Thr	His	Asn	Ile	Thr	Glu	Leu	Gly	His	Tyr	Ala	Leu			
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His	Leu	Leu	Ile	Leu	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu			
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Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Ser	Arg	Leu	Thr	Leu	Leu			
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Thr	His	Arg	Pro	Asp	Pro	Thr	Gly	Pro	Gly	Leu	Asp	Arg	Glu	Gln			
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Thr	His	Arg	Ser	Ser	Val	Pro	Thr	Thr	Ser	Thr	Gly	Val	Val	Ser			
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Asp	Asn	Val	Met	Lys	His	Leu	Leu	Ser	Pro	Leu	Phe	Gln	Arg	Ser			
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Ser	Leu	Gly	Ala	Arg	Tyr	Thr	Gly	Cys	Arg	Val	Ile	Ala	Leu	Arg			
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Ser Val Lys Asn Gly Ala Glu Thr Arg Val Asp Leu Leu Cys Thr
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 Tyr Leu Gln Pro Leu Ser Gly Pro Gly Leu Pro Ile Lys Gln Val
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 Phe His Glu Leu Ser Gln Gln Thr His Gly Ile Thr Arg Leu Gly
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 Pro Tyr Ser Leu Asp Lys Asp Ser Leu Tyr Leu Asn Gly Tyr Asn
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 Glu Pro Gly Leu Asp Glu Pro Pro Thr Thr Pro Lys Pro Ala Thr
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 Thr Phe Leu Pro Pro Leu Ser Glu Ala Thr Thr Ala Met Gly Tyr
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 His Leu Lys Thr Leu Thr Leu Asn Phe Thr Ile Ser Asn Leu Gln
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 Tyr Ser Pro Asp Met Gly Lys Gly Ser Ala Thr Phe Asn Ser Thr
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 Glu Gly Val Leu Gln His Leu Leu Arg Pro Leu Phe Gln Lys Ser
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 Ser Met Gly Pro Phe Tyr Leu Gly Cys Gln Leu Ile Ser Leu Arg
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 Tyr Trp Glu Leu Ser Gln Leu Thr His Gly Val Thr Gln Leu Gly
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Tyr

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<211> 1422

<212> DNA

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Ser Thr Glu Gly	Val Leu Gln His	Leu Leu Arg Pro	Leu Phe	Gln Lys
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Ser Ser Met Gly	Pro Phe Tyr Leu	Gly Cys Gln Leu	Ile Ser	Leu Arg
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Pro Glu Lys Asp	Gly Ala Ala Thr	Gly Val Asp Thr	Thr Cys	Thr Tyr
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His Pro Asp Pro	Val Gly Pro Gly	Leu Asp Ile Gln	Gln Leu	Tyr Trp
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Glu Leu Ser Gln	Leu Thr His Gly	Val Thr Gln Leu	Gly Phe	Tyr Val
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Leu Asp Arg Asp	Ser Leu Phe Ile	Asn Gly Tyr Ala	Pro Gln	Asn Leu
	115	120	125	
Ser Ile Arg Gly	Glu Tyr Gln Ile	Asn Phe His Ile	Val Asn	Trp Asn
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Leu Ser Asn Pro	Asp Pro Thr Ser	Ser Glu Tyr Ile	Thr Leu	Leu Arg
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Asp Ile Gln Asp	Lys Val Thr Thr	Leu Tyr Lys Gly	Ser Gln	Leu His
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Asp Thr Phe Arg	Phe Cys Leu Val	Thr Asn Leu Thr	Met Asp	Ser Val
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Leu Val Thr Val	Lys Ala Leu Phe	Ser Ser Asn Leu	Asp Pro	Ser Leu
	195	200	205	
Val Glu Gln Val	Phe Leu Asp Lys	Thr Leu Asn Ala	Ser Phe	His Trp
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Leu Gly Ser Thr	Tyr Gln Leu Val	Asp Ile His Val	Thr Glu	Met Glu
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Ser Ser Val Tyr	Gln Pro Thr Ser	Ser Ser Ser Thr	Gln His	Phe Tyr
	245	250	255	
Leu Asn Phe Thr	Ile Thr Asn Leu	Pro Tyr Ser Gln	Asp Lys	Ala Gln
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Pro Gly Thr Thr	Asn Tyr Gln Arg	Asn Lys Arg Asn	Ile Glu	Asp Ala
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Thr Leu Thr Pro Leu Asn Ala Ser Arg Gln Met Ala Ser Thr Ile Leu

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Thr	Glu	Met	Met	Ile	Thr	Thr	Pro	Tyr	Val	Phe	Pro	Asp	Val	Pro	Glu
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Leu	Pro	Arg	Thr	Thr	Pro	Ser	Val	Leu	Asn	Arg	Glu	Ser	Glu	Thr	Thr
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Ala	Ser	Leu	Val	Ser	Arg	Ser	Gly	Ala	Glu	Arg	Ser	Pro	Val	Ile	Gln
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Gly	Ala	Asp	Val	Ser	Ser	Ala	Ile	Pro	Thr	Asn	Ile	Ser	Pro	Ser	Glu
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Leu	Asp	Ala	Leu	Thr	Pro	Leu	Val	Thr	Ile	Ser	Gly	Thr	Asp	Thr	Ser
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Thr	Thr	Phe	Pro	Thr	Leu	Thr	Lys	Ser	Pro	His	Glu	Thr	Glu	Thr	Arg
				245					250					255	
Thr	Thr	Trp	Leu	Thr	His	Pro	Ala	Glu	Thr	Ser	Ser	Thr	Ile	Pro	Arg
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Thr	Ile	Pro	Asn	Phe	Ser	His	His	Glu	Ser	Asp	Ala	Thr	Pro	Ser	Ile
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Ala	Thr	Ser	Pro	Gly	Ala	Glu	Thr	Ser	Ser	Ala	Ile	Pro	Ile	Met	Thr
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Val	Ser	Pro	Gly	Ala	Glu	Asp	Leu	Val	Thr	Ser	Gln	Val	Thr	Ser	Ser
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Gly	Thr	Asp	Arg	Asn	Met	Thr	Ile	Pro	Thr	Leu	Thr	Leu	Ser	Pro	Gly
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Glu	Pro	Lys	Thr	Ile	Ala	Ser	Leu	Val	Thr	His	Pro	Glu	Ala	Gln	Thr
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Val	Thr	Ser	Met	Val	Thr	Ser	Leu	Ala	Ala	Lys	Thr	Ser	Thr	Thr	Asn
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Arg	Ala	Leu	Thr	Asn	Ser	Pro	Gly	Glu	Pro	Ala	Thr	Thr	Val	Ser	Leu
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Val Thr His Pro Ala Gln Thr Ser Pro Thr Val Pro Trp Thr Thr Ser
 405 410 415
 Ile Phe Phe His Ser Lys Ser Asp Thr Thr Pro Ser Met Thr Thr Ser
 420 425 430
 His Gly Ala Glu Ser Ser Ser Ala Val Pro Thr Pro Thr Val Ser Thr
 435 440 445
 Glu Val Pro Gly Val Val Thr Pro Leu Val Thr Ser Ser Arg Ala Val
 450 455 460
 Ile Ser Thr Thr Ile Pro Ile Leu Thr Leu Ser Pro Gly Glu Pro Glu
 465 470 475 480
 Thr Thr Pro Ser Met Ala Thr Ser His Gly Glu Glu Ala Ser Ser Ala
 485 490 495
 Ile Pro Thr Pro Thr Val Ser Pro Gly Val Pro Gly Val Val Thr Ser
 500 505 510
 Leu Val Thr Ser Ser Arg Ala Val Thr Ser Thr Thr Ile Pro Ile Leu
 515 520 525
 Thr Phe Ser Leu Gly Glu Pro Glu Thr Thr Pro Ser Met Ala Thr Ser
 530 535 540
 His Gly Thr Glu Ala Gly Ser Ala Val Pro Thr Val Leu Pro Glu Val
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 Pro Gly Met Val Thr Ser Leu Val Ala Ser Ser Arg Ala Val Thr Ser
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 Thr Thr Leu Pro Thr Leu Thr Leu Ser Pro Gly Glu Pro Glu Thr Thr
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 Pro Ser Met Ala Thr Ser His Gly Ala Glu Ala Ser Ser Thr Val Pro
 595 600 605
 Thr Val Ser Pro Glu Val Pro Gly Val Val Thr Ser Leu Val Thr Ser
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 Ser Ser Gly Val Asn Ser Thr Ser Ile Pro Thr Leu Ile Leu Ser Pro
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 Gly Glu Leu Glu Thr Thr Pro Ser Met Ala Thr Ser His Gly Ala Glu
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 Ala Ser Ser Ala Val Pro Thr Pro Thr Val Ser Pro Gly Val Ser Gly
 660 665 670
 Val Val Thr Pro Leu Val Thr Ser Ser Arg Ala Val Thr Ser Thr Thr
 675 680 685
 Ile Pro Ile Leu Thr Leu Ser Ser Ser Glu Pro Glu Thr Thr Pro Ser
 690 695 700
 Met Ala Thr Ser His Gly Val Glu Ala Ser Ser Ala Val Leu Thr Val
 705 710 715 720

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Ala	Val	Thr	Ser	Thr	Thr	Ile	Pro	Thr	Leu	Thr	Ile	Ser	Ser	Asp	Glu	
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Pro	Glu	Thr	Thr	Thr	Ser	Leu	Val	Thr	His	Ser	Glu	Ala	Lys	Met	Ile	
				755					760					765		
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Leu	Thr	Val	Ala	Ser	Ser	Gln	Pro	Glu	Thr	Ile	Asp	Ser	Trp	Val	Ala	
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His	Pro	Gly	Thr	Glu	Ala	Ser	Ser	Val	Val	Pro	Thr	Leu	Thr	Val	Ser	
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Ser	Ser	Ser	Thr	Leu	Pro	Arg	Thr	Thr	Ser	Arg	Phe	Ser	His	Ser	Glu	
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Leu	Asp	Thr	Met	Pro	Ser	Thr	Val	Thr	Ser	Pro	Glu	Ala	Glu	Ser	Ser	
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Ser	Ala	Ile	Ser	Thr	Thr	Ile	Ser	Pro	Gly	Ile	Pro	Gly	Val	Leu	Thr	
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Ser	Leu	Val	Thr	Ser	Ser	Gly	Arg	Asp	Ile	Ser	Ala	Thr	Phe	Pro	Thr	
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Val	Pro	Glu	Ser	Pro	His	Glu	Ser	Glu	Ala	Thr	Ala	Ser	Trp	Val	Thr	
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His	Pro	Ala	Val	Thr	Ser	Thr	Thr	Val	Pro	Arg	Thr	Thr	Pro	Asn	Tyr	
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His Ser	Pro Gly Met Pro	Glu	Thr Thr Ala Leu	Leu	Ser Thr His
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Pro Arg	Thr Glu Thr Ser	Lys	Thr Phe Pro Ala	Ser	Thr Val Phe
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Pro Gln	Val Ser Glu Thr	Thr	Ala Ser Leu Thr	Ile	Arg Pro Gly
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Ala Glu	Thr Ser Thr Ala	Leu	Pro Thr Gln Thr	Thr	Ser Ser Leu
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Phe Thr	Leu Leu Val Thr	Gly	Thr Ser Arg Val	Asp	Leu Ser Pro
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Thr Ala	Ser Pro Gly Val	Ser	Ala Lys Thr Ala	Pro	Leu Ser Thr
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Ala Val	Ser Gly Leu Ser	Ser	Ala Ser Ile Thr	Thr	Asp Lys Pro
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Gln Thr	Val Thr Ser Trp	Asn	Thr Glu Thr Ser	Pro	Ser Val Thr
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Val Glu	Ala Thr Asn Leu	Ala	Thr Thr Gly Ser	Ser	Pro Thr Val
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Ala Lys	Thr Thr Thr Thr	Phe	Asn Thr Leu Ala	Gly	Ser Leu Phe
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Val Thr	Ser Arg Thr Ser	Tyr	Asn His Arg Ser	Trp	Ile Ser Thr
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Thr Ser	Ser Tyr Asn Arg	Arg	Tyr Trp Thr Pro	Ala	Thr Ser Thr
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Pro Val Thr Ser Thr Phe Ser Pro Gly Ile Ser Thr Ser Ser Ile
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 Pro Ser Ser Thr Ala Ala Thr Val Pro Phe Met Val Pro Phe Thr
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 Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg
 1655 1660 1665
 His Pro Gly Ser Arg Lys Phe Asn Ala Thr Glu Arg Glu Leu Gln
 1670 1675 1680
 Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu
 1685 1690 1695
 Tyr Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu Lys Asp Ser
 1700 1705 1710
 Ser Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro
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 Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser
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 Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp
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 Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met
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Asn	Leu	His	Tyr	Glu	Glu	Asn	Met	Gln	His	Pro	Gly	Ser	Arg	Lys	Phe	
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Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	
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His Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr
 100 105 110

Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr
 115 120 125

Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Arg Ser
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Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala
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Thr Ser Gly Thr Pro Ser Ser Leu Pro
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 gttgaacttc ctggaaccag ggtgttgcatt gttttcctca taatgcaggt tggatgatgg 420
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<213> Homo sapiens

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Thr Leu Asp Arg Asp Ser Leu Tyr Val
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Gln Leu Thr Asn Ser Ile Thr Glu Leu
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<400> 158

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 Asn Ser Ser Leu Glu Tyr Leu Tyr Ser Gly Cys Arg Leu Ala Ser Leu
 50 55 60
 Arg Pro Glu Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr
 65 70 75 80
 His Arg Pro Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr
 85 90 95
 Trp Glu Leu Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr
 100 105 110
 Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser
 115 120 125
 Ser Met Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Val Gly
 130 135 140
 Thr Ser Gly Thr Pro Ser Ser Pro Ser Pro Thr Ala Ala Gly Pro
 145 150 155 160
 Leu Leu Met Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr
 165 170 175
 Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met Glu
 180 185 190
 Ser Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val
 195 200 205
 Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys
 210 215 220
 Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp
 225 230 235 240
 Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu Ser
 245 250 255
 Lys Leu Thr Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr Leu Asp Arg
 260 265 270

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Phe Thr His Trp Ile Pro Val Pro Thr Ser Ser Thr Pro Gly Thr Ser
595 600 605

Thr Val Asp Leu Gly Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr
610 615 620

Ala Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
625 630 635 640

Asn Leu Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys Phe
645 650 655

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys
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Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu
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Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr
690 695 700

His Arg Leu Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr
705 710 715 720

Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr
725 730 735

Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Thr
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Ser Ala Pro Asn Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly
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Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr
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Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys
35 40 45

Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu

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102200 002500

Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala Ala
 370 375 380
 Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg Pro
 385 390 395 400
 Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His
 405 410 415
 Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu Tyr
 420 425 430
 Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr Pro
 435 440 445
 Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser Phe
 450 455 460
 Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn
 465 470 475 480
 Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly
 485 490 495
 Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys
 500 505 510
 Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg
 515 520 525
 Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly Met Asp
 530 535 540
 Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg Pro Gly Leu Asp Arg
 545 550 555 560
 Glu Gln Leu Tyr Cys Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu
 565 570 575
 Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe
 580 585 590
 Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr
 595 600 605
 Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser Phe Pro Gly His Thr
 610 615 620
 Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr Ile Thr
 625 630 635 640
 Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe
 645 650 655
 Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys
 660 665 670
 Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu
 675 680 685

415

Ala Thr Ser Leu Gly Ala Glu Thr Ser Thr Ala Leu Pro Arg Thr Thr
115 120 125

435					440					445					
Val	Thr	Pro	Leu	Val	Thr	Ser	Ser	Arg	Ala	Val	Ile	Ser	Thr	Thr	Ile
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Pro	Ile	Leu	Thr	Leu	Ser	Pro	Gly	Glu	Pro	Glu	Thr	Thr	Pro	Ser	Met
465					470					475					480
Ala	Thr	Ser	His	Gly	Glu	Glu	Ala	Ser	Ser	Ala	Ile	Pro	Thr	Pro	Thr
				485					490					495	
Val	Ser	Pro	Gly	Val	Pro	Gly	Val	Val	Thr	Ser	Leu	Val	Thr	Ser	Ser
			500					505					510		
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Gly	Ser	Ala	Val	Pro	Thr	Val	Leu	Pro	Glu	Val	Pro	Gly	Met	Val	Thr
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Ser	Leu	Val	Ala	Ser	Ser	Arg	Ala	Val	Thr	Ser	Thr	Thr	Leu	Pro	Thr
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Thr	Pro	Ser	Met	Ala	Thr	Ser	His	Gly	Ala	Glu	Ala	Ser	Ser	Ala	Val
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Pro	Thr	Pro	Thr	Val	Ser	Pro	Gly	Val	Ser	Gly	Val	Val	Thr	Pro	Leu
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Val	Thr	Ser	Ser	Arg	Ala	Val	Thr	Ser	Thr	Thr	Ile	Pro	Ile	Leu	Thr
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Leu	Ser	Ser	Ser	Glu	Pro	Glu	Thr	Thr	Pro	Ser	Met	Ala	Thr	Ser	His
	690					695					700				
Gly	Val	Glu	Ala	Ser	Ser	Ala	Val	Leu	Thr	Val	Ser	Pro	Glu	Val	Pro
705					710					715					720
Gly	Met	Val	Thr	Ser	Leu	Val	Thr	Ser	Ser	Arg	Ala	Val	Thr	Ser	Thr
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Lys	Ser	Asp	Thr	Thr	Leu	Pro	Val	Ala	Ile	Thr	Ser	Pro	Gly	Pro
	1085					1090					1095			
Glu	Ala	Ser	Ser	Ala	Val	Ser	Thr	Thr	Thr	Ile	Ser	Pro	Asp	Met
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Ser	Asp	Leu	Val	Thr	Ser	Leu	Val	Pro	Ser	Ser	Gly	Thr	Asp	Thr
	1115					1120					1125			
Ser	Thr	Thr	Phe	Pro	Thr	Leu	Ser	Glu	Thr	Pro	Tyr	Glu	Pro	Glu
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	1145					1150					1155			
Val	Ser	Gly	Thr	Ile	Pro	Asn	Phe	Ser	His	Arg	Gly	Ser	Asp	Thr
	1160					1165					1170			
Ala	Pro	Ser	Met	Val	Thr	Ser	Pro	Gly	Val	Asp	Thr	Arg	Ser	Gly
	1175					1180					1185			
Val	Pro	Thr	Thr	Thr	Ile	Pro	Pro	Ser	Ile	Pro	Gly	Val	Val	Thr
	1190					1195					1200			
Ser	Gln	Val	Thr	Ser	Ser	Ala	Thr	Asp	Thr	Ser	Thr	Ala	Ile	Pro
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His	Pro	Pro	Gln	Thr	Ser	Thr	Pro	Val	Ser	Arg	Thr	Thr	Ser	Ser
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Phe	Ser	His	Ser	Ser	Pro	Asp	Ala	Thr	Pro	Val	Met	Ala	Thr	Ser
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	1295					1300					1305			
Gly	Ala	Pro	Glu	Met	Val	Thr	Ser	Gln	Ile	Thr	Ser	Ser	Gly	Ala
	1310					1315					1320			
Ala	Thr	Ser	Thr	Thr	Val	Pro	Thr	Leu	Thr	His	Ser	Pro	Gly	Met
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Pro	Glu	Thr	Thr	Ala	Leu	Leu	Ser	Thr	His	Pro	Arg	Thr	Glu	Thr
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	1475					1480					1485				
Trp	Asn	Thr	Glu	Thr	Ser	Pro	Ser	Val	Thr	Ser	Val	Gly	Pro	Pro	
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Ser	Glu	Met	Pro	Thr	Pro	Pro	Lys	Thr	Ser	His	Gly	Glu	Gly	Val	
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Ala	Thr	Val	Pro	Phe	Met	Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	
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Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp	Met	Arg	His	Pro	Gly	Ser	Arg
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Lys	Phe	Asn	Ala	Thr	Glu	Arg	Glu	Leu	Gln	Gly	Leu	Leu	Lys	Pro
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Asp	Ala	Ile	Cys	Thr	His	Arg	Pro	Asp	Pro	Glu	Asp	Leu	Gly	Leu
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Ile	Gln	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	Tyr
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Pro	Gly	Thr	Ser	Thr	Val	Asp	Val	Gly	Thr	Ser	Gly	Thr	Pro	Ser
	1775					1780					1785			
Ser	Ser	Pro	Ser	Pro	Thr	Ala	Ala	Gly	Pro	Leu	Leu	Met	Pro	Phe
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Arg	Arg	Thr	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Met	Glu	Ser	Val	Leu
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Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro
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	1925					1930					1935			
Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu	Ser	Ser	Pro	Thr	Ile	Met	Ala
	1940					1945					1950			

Ala Gly 1955	Pro Leu Leu Val	Pro 1960	Phe Thr Leu Asn	Phe 1965	Thr Ile Thr
Asn Leu 1970	Gln Tyr Gly Glu	Asp 1975	Met Gly His Pro	Gly 1980	Ser Arg Lys
Phe Asn 1985	Thr Thr Glu Arg	Val 1990	Leu Gln Gly Leu	Leu 1995	Gly Pro Ile
Phe Lys 2000	Asn Thr Ser Val	Gly 2005	Pro Leu Tyr Ser	Gly 2010	Cys Arg Leu
Thr Ser 2015	Leu Arg Ser Glu	Lys 2020	Asp Gly Ala Ala	Thr 2025	Gly Val Asp
Ala Ile 2030	Cys Ile His His	Leu 2035	Asp Pro Lys Ser	Pro 2040	Gly Leu Asn
Arg Glu 2045	Arg Leu Tyr Trp	Glu 2050	Leu Ser Gln Leu	Thr 2055	Asn Gly Ile
Lys Glu 2060	Leu Gly Pro Tyr	Thr 2065	Leu Asp Arg Asn	Ser 2070	Leu Tyr Val
Asn Gly 2075	Phe Thr His Arg	Thr 2080	Ser Val Pro Thr	Ser 2085	Ser Thr Pro
Gly Thr 2090	Ser Thr Val Asp	Leu 2095	Gly Thr Ser Gly	Thr 2100	Pro Phe Ser
Leu Pro 2105	Ser Pro Ala Thr	Ala 2110	Gly Pro Leu Leu	Val 2115	Leu Phe Thr
Leu Asn 2120	Phe Thr Ile Thr	Asn 2125	Leu Lys Tyr Glu	Glu 2130	Asp Met His
Arg Pro 2135	Gly Ser Arg Lys	Phe 2140	Asn Thr Thr Glu	Arg 2145	Val Leu Gln
Thr Leu 2150	Leu Gly Pro Met	Phe 2155	Lys Asn Thr Ser	Val 2160	Gly Leu Leu
Tyr Ser 2165	Gly Cys Arg Leu	Thr 2170	Leu Leu Arg Ser	Glu 2175	Lys Asp Gly
Ala Ala 2180	Thr Gly Val Asp	Ala 2185	Ile Cys Thr His	Arg 2190	Leu Asp Pro
Lys Ser 2195	Pro Gly Leu Asp	Arg 2200	Glu Gln Leu Tyr	Trp 2205	Glu Leu Ser
Gln Leu 2210	Thr Asn Gly Ile	Lys 2215	Glu Leu Gly Pro	Tyr 2220	Thr Leu Asp
Arg Asn 2225	Ser Leu Tyr Val	Asn 2230	Gly Phe Thr His	Trp 2235	Ile Pro Val
Pro Thr	Ser Ser Thr Pro	Gly	Thr Ser Thr Val	Asp	Leu Gly Ser

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T0250 005500

2240	2245	2250
Gly Thr Pro Ser Ser Leu 2255	Pro Ser Pro Thr Ala 2260	Ala Gly Pro Leu 2265
Leu Val Pro Phe Thr Leu 2270	Asn Phe Thr Ile Thr 2275	Asn Leu Gln Tyr 2280
Glu Glu Asp Met His His 2285	Pro Gly Ser Arg Lys 2290	Phe Asn Thr Thr 2295
Glu Arg Val Leu Gln Gly 2300	Leu Leu Gly Pro Met 2305	Phe Lys Asn Thr 2310
Ser Val Gly Leu Leu Tyr 2315	Ser Gly Cys Arg Leu 2320	Thr Leu Leu Arg 2325
Ser Glu Lys Asp Gly Ala 2330	Ala Thr Gly Val Asp 2335	Ala Ile Cys Thr 2340
His Arg Leu Asp Pro Lys 2345	Ser Pro Gly Val Asp 2350	Arg Glu Gln Leu 2355
Tyr Trp Glu Leu Ser Gln 2360	Leu Thr Asn Gly Ile 2365	Lys Glu Leu Gly 2370
Pro Tyr Thr Leu Asp Arg 2375	Asn Ser Leu Tyr Val 2380	Asn Gly Phe Thr 2385
His Gln Thr Ser Ala Pro 2390	Asn Thr Ser Thr Pro 2395	Gly Thr Ser Thr 2400
Val Asp Leu Gly Thr Ser 2405	Gly Thr Pro Ser Ser 2410	Leu Pro Ser Pro 2415
Thr Ser Ala Gly Pro Leu 2420	Leu Val Pro Phe Thr 2425	Leu Asn Phe Thr 2430
Ile Thr Asn Leu Gln Tyr 2435	Glu Glu Asp Met Arg 2440	His Pro Gly Ser 2445
Arg Lys Phe Asn Thr Thr 2450	Glu Arg Val Leu Gln 2455	Gly Leu Leu Lys 2460
Pro Leu Phe Lys Ser Thr 2465	Ser Val Gly Pro Leu 2470	Tyr Ser Gly Cys 2475
Arg Leu Thr Leu Leu Arg 2480	Ser Glu Lys Asp Gly 2485	Ala Ala Thr Gly 2490
Val Asp Ala Ile Cys Thr 2495	His Arg Leu Asp Pro 2500	Lys Ser Pro Gly 2505
Val Asp Arg Glu Gln Leu 2510	Tyr Trp Glu Leu Ser 2515	Gln Leu Thr Asn 2520
Gly Ile Lys Glu Leu Gly 2525	Pro Tyr Thr Leu Asp 2530	Arg Asn Ser Leu 2535

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Tyr	Val	Asn	Gly	Phe	Thr	His	Gln	Thr	Ser	Ala	Pro	Asn	Thr	Ser
	2540					2545					2550			
Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro
	2555					2560					2565			
Ser	Ser	Leu	Pro	Ser	Pro	Thr	Ser	Ala	Gly	Pro	Leu	Leu	Val	Pro
	2570					2575					2580			
Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp
	2585					2590					2595			
Met	His	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val
	2600					2605					2610			
Leu	Gln	Gly	Leu	Leu	Gly	Pro	Met	Phe	Lys	Asn	Thr	Ser	Val	Gly
	2615					2620					2625			
Leu	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys
	2630					2635					2640			
Asn	Gly	Ala	Ala	Thr	Gly	Met	Asp	Ala	Ile	Cys	Ser	His	Arg	Leu
	2645					2650					2655			
Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asn	Arg	Glu	Gln	Leu	Tyr	Trp	Glu
	2660					2665					2670			
Leu	Ser	Gln	Leu	Thr	His	Gly	Ile	Lys	Glu	Leu	Gly	Pro	Tyr	Thr
	2675					2680					2685			
Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser
	2690					2695					2700			
Ser	Val	Ala	Pro	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu
	2705					2710					2715			
Gly	Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu	Pro	Ser	Pro	Thr	Thr	Ala
	2720					2725					2730			
Val	Pro	Leu	Leu	Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn
	2735					2740					2745			
Leu	Gln	Tyr	Gly	Glu	Asp	Met	Arg	His	Pro	Gly	Ser	Arg	Lys	Phe
	2750					2755					2760			
Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Gly	Pro	Leu	Phe
	2765					2770					2775			
Lys	Asn	Ser	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Ile
	2780					2785					2790			
Ser	Leu	Arg	Ser	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala
	2795					2800					2805			
Ile	Cys	Thr	His	His	Leu	Asn	Pro	Gln	Ser	Pro	Gly	Leu	Asp	Arg
	2810					2815					2820			
Glu	Gln	Leu	Tyr	Trp	Gln	Leu	Ser	Gln	Met	Thr	Asn	Gly	Ile	Lys
	2825					2830					2835			

Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn
	2840					2845					2850			
Gly	Phe	Thr	His	Arg	Ser	Ser	Gly	Leu	Thr	Thr	Ser	Thr	Pro	Trp
	2855					2860					2865			
Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Ser	Pro	Val
	2870					2875					2880			
Pro	Ser	Pro	Thr	Thr	Ala	Gly	Pro	Leu	Leu	Val	Pro	Phe	Thr	Leu
	2885					2890					2895			
Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp	Met	His	Arg
	2900					2905					2910			
Pro	Gly	Ser	Arg	Lys	Phe	Asn	Ala	Thr	Glu	Arg	Val	Leu	Gln	Gly
	2915					2920					2925			
Leu	Leu	Ser	Pro	Ile	Phe	Lys	Asn	Ser	Ser	Val	Gly	Pro	Leu	Tyr
	2930					2935					2940			
Ser	Gly	Cys	Arg	Leu	Thr	Ser	Leu	Arg	Pro	Glu	Lys	Asp	Gly	Ala
	2945					2950					2955			
Ala	Thr	Gly	Met	Asp	Ala	Val	Cys	Leu	Tyr	His	Pro	Asn	Pro	Lys
	2960					2965					2970			
Arg	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Gln
	2975					2980					2985			
Leu	Thr	His	Asn	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Ser	Leu	Asp	Arg
	2990					2995					3000			
Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Gln	Asn	Ser	Val	Pro
	3005					3010					3015			
Thr	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Tyr	Trp	Ala	Thr	Thr
	3020					3025					3030			
Gly	Thr	Pro	Ser	Ser	Phe	Pro	Gly	His	Thr	Glu	Pro	Gly	Pro	Leu
	3035					3040					3045			
Leu	Ile	Pro	Phe	Thr	Phe	Asn	Phe	Thr	Ile	Thr	Asn	Leu	His	Tyr
	3050					3055					3060			
Glu	Glu	Asn	Met	Gln	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr
	3065					3070					3075			
Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Asn	Thr
	3080					3085					3090			
Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Ser	Leu	Arg
	3095					3100					3105			
Pro	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly	Met	Asp	Ala	Val	Cys	Leu
	3110					3115					3120			
Tyr	His	Pro	Asn	Pro	Lys	Arg	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu

3125	3130	3135
Tyr Cys Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly 3140 3145 3150		
Pro Tyr Ser Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr 3155 3160 3165		
His Gln Asn Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr 3170 3175 3180		
Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser Phe Pro Gly His 3185 3190 3195		
Thr Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr 3200 3205 3210		
Ile Thr Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser 3215 3220 3225		
Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys 3230 3235 3240		
Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys 3245 3250 3255		
Arg Leu Thr Leu Leu Arg Pro Glu Lys His Glu Ala Ala Thr Gly 3260 3265 3270		
Val Asp Thr Ile Cys Thr His Arg Val Asp Pro Ile Gly Pro Gly 3275 3280 3285		
Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn 3290 3295 3300		
Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu 3305 3310 3315		
Tyr Val Asn Gly Phe Asn Pro Arg Ser Ser Val Pro Thr Thr Ser 3320 3325 3330		
Thr Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro 3335 3340 3345		
Ser Ser Leu Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile Pro 3350 3355 3360		
Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn 3365 3370 3375		
Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val 3380 3385 3390		
Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly 3395 3400 3405		
Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys 3410 3415 3420		

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His Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Val
 3425 3430 3435
 Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu
 3440 3445 3450
 Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa
 3455 3460 3465
 Leu Asp Arg Xaa Ser Leu Tyr Val Asn Gly Phe Xaa Xaa Xaa Xaa
 3470 3475 3480
 Xaa Xaa Xaa Xaa Thr Ser Thr Pro Gly Thr Ser Xaa Val Xaa Leu
 3485 3490 3495
 Xaa Thr Ser Gly Thr Pro Xaa Xaa Xaa Pro Xaa Xaa Thr Ser Ala
 3500 3505 3510
 Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn
 3515 3520 3525
 Leu Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys Phe
 3530 3535 3540
 Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe
 3545 3550 3555
 Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr
 3560 3565 3570
 Leu Leu Arg Pro Glu Lys Asn Gly Ala Ala Thr Gly Met Asp Ala
 3575 3580 3585
 Ile Cys Ser His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asp Arg
 3590 3595 3600
 Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Gly Ile Lys
 3605 3610 3615
 Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn
 3620 3625 3630
 Gly Phe Thr His Arg Ser Ser Val Ala Pro Thr Ser Thr Pro Gly
 3635 3640 3645
 Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser Leu
 3650 3655 3660
 Pro Ser Pro Thr Thr Ala Val Pro Leu Leu Val Pro Phe Thr Leu
 3665 3670 3675
 Asn Phe Thr Ile Thr Asn Leu Gln Tyr Gly Glu Asp Met Arg His
 3680 3685 3690
 Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly
 3695 3700 3705
 Leu Leu Gly Pro Leu Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr
 3710 3715 3720

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Ser	Gly	Cys	Arg	Leu	Ile	Ser	Leu	Arg	Ser	Glu	Lys	Asp	Gly	Ala
3725						3730					3735			
Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	His	Leu	Asn	Pro	Gln
3740						3745					3750			
Ser	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Gln	Leu	Ser	Gln
3755						3760					3765			
Met	Thr	Asn	Gly	Ile	Lys	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg
3770						3775					3780			
Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Gly	Leu
3785						3790					3795			
Thr	Thr	Ser	Thr	Pro	Trp	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser
3800						3805					3810			
Gly	Thr	Pro	Ser	Pro	Val	Pro	Ser	Pro	Thr	Thr	Ala	Gly	Pro	Leu
3815						3820					3825			
Leu	Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr
3830						3835					3840			
Glu	Glu	Asp	Met	His	Arg	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Ala	Thr
3845						3850					3855			
Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Ser	Pro	Ile	Phe	Lys	Asn	Ser
3860						3865					3870			
Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Ser	Leu	Arg
3875						3880					3885			
Pro	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly	Met	Asp	Ala	Val	Cys	Leu
3890						3895					3900			
Tyr	His	Pro	Asn	Pro	Lys	Arg	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu
3905						3910					3915			
Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	His	Asn	Ile	Thr	Glu	Leu	Gly
3920						3925					3930			
Pro	Tyr	Ser	Leu	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr
3935						3940					3945			
His	Gln	Ser	Ser	Met	Thr	Thr	Thr	Arg	Thr	Pro	Asp	Thr	Ser	Thr
3950						3955					3960			
Met	His	Leu	Ala	Thr	Ser	Arg	Thr	Pro	Ala	Ser	Leu	Ser	Gly	Pro
3965						3970					3975			
Thr	Thr	Ala	Ser	Pro	Leu	Leu	Val	Leu	Phe	Thr	Ile	Asn	Cys	Thr
3980						3985					3990			
Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp	Met	Arg	Arg	Thr	Gly	Ser
3995						4000					4005			
Arg	Lys	Phe	Asn	Thr	Met	Glu	Ser	Val	Leu	Gln	Gly	Leu	Leu	Lys

	4010						4015						4020				
Pro	Leu 4025	Phe	Lys	Asn	Thr	Ser 4030	Val	Gly	Pro	Leu	Tyr 4035	Ser	Gly	Cys			
Arg	Leu 4040	Thr	Leu	Leu	Arg	Pro 4045	Lys	Lys	Asp	Gly	Ala 4050	Ala	Thr	Gly			
Val	Asp 4055	Ala	Ile	Cys	Thr	His 4060	Arg	Leu	Asp	Pro	Lys 4065	Ser	Pro	Gly			
Leu	Asn 4070	Arg	Glu	Gln	Leu	Tyr 4075	Trp	Glu	Leu	Ser	Lys 4080	Leu	Thr	Asn			
Asp	Ile 4085	Glu	Glu	Leu	Gly	Pro 4090	Tyr	Thr	Leu	Asp	Arg 4095	Asn	Ser	Leu			
Tyr	Val 4100	Asn	Gly	Phe	Thr	His 4105	Gln	Ser	Ser	Val	Ser 4110	Thr	Thr	Ser			
Thr	Pro 4115	Gly	Thr	Ser	Thr	Val 4120	Asp	Leu	Arg	Thr	Ser 4125	Gly	Thr	Pro			
Ser	Ser 4130	Leu	Ser	Ser	Pro	Thr 4135	Ile	Met	Xaa	Xaa	Xaa 4140	Pro	Leu	Leu			
Xaa	Pro 4145	Phe	Thr	Leu	Asn	Phe 4150	Thr	Ile	Thr	Asn	Leu 4155	Xaa	Tyr	Glu			
Glu	Xaa 4160	Met	Xaa	Xaa	Pro	Gly 4165	Ser	Arg	Lys	Phe	Asn 4170	Thr	Thr	Glu			
Arg	Val 4175	Leu	Gln	Gly	Leu	Leu 4180	Arg	Pro	Leu	Phe	Lys 4185	Asn	Thr	Ser			
Val	Ser 4190	Ser	Leu	Tyr	Ser	Gly 4195	Cys	Arg	Leu	Thr	Leu 4200	Leu	Arg	Pro			
Glu	Lys 4205	Asp	Gly	Ala	Ala	Thr 4210	Arg	Val	Asp	Ala	Ala 4215	Cys	Thr	Tyr			
Arg	Pro 4220	Asp	Pro	Lys	Ser	Pro 4225	Gly	Leu	Asp	Arg	Glu 4230	Gln	Leu	Tyr			
Trp	Glu 4235	Leu	Ser	Gln	Leu	Thr 4240	His	Ser	Ile	Thr	Glu 4245	Leu	Gly	Pro			
Tyr	Thr 4250	Leu	Asp	Arg	Val	Ser 4255	Leu	Tyr	Val	Asn	Gly 4260	Phe	Asn	Pro			
Arg	Ser 4265	Ser	Val	Pro	Thr	Thr 4270	Ser	Thr	Pro	Gly	Thr 4275	Ser	Thr	Val			
His	Leu 4280	Ala	Thr	Ser	Gly	Thr 4285	Pro	Ser	Ser	Leu	Pro 4290	Gly	His	Thr			
Xaa	Xaa 4295	Xaa	Pro	Leu	Leu	Xaa 4300	Pro	Phe	Thr	Leu	Asn 4305	Phe	Thr	Ile			

Thr	Asn	Leu	Xaa	Tyr	Glu	Glu	Xaa	Met	Xaa	Xaa	Pro	Gly	Ser	Arg
	4310					4315					4320			
Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro
	4325					4330					4335			
Leu	Phe	Arg	Asn	Ser	Ser	Leu	Glu	Tyr	Leu	Tyr	Ser	Gly	Cys	Arg
	4340					4345					4350			
Leu	Ala	Ser	Leu	Arg	Pro	Glu	Lys	Asp	Ser	Ser	Ala	Met	Ala	Val
	4355					4360					4365			
Asp	Ala	Ile	Cys	Thr	His	Arg	Pro	Asp	Pro	Glu	Asp	Leu	Gly	Leu
	4370					4375					4380			
Asp	Arg	Glu	Arg	Leu	Tyr	Trp	Glu	Leu	Ser	Asn	Leu	Thr	Asn	Gly
	4385					4390					4395			
Ile	Gln	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	Tyr
	4400					4405					4410			
Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Phe	Leu	Thr	Thr	Ser	Thr
	4415					4420					4425			
Pro	Trp	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Ser
	4430					4435					4440			
Pro	Val	Pro	Ser	Pro	Thr	Thr	Ala	Gly	Pro	Leu	Leu	Val	Pro	Phe
	4445					4450					4455			
Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp	Met
	4460					4465					4470			
His	Arg	Pro	Gly	Ser	Arg	Arg	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu
	4475					4480					4485			
Gln	Gly	Leu	Leu	Thr	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro
	4490					4495					4500			
Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Gln
	4505					4510					4515			
Glu	Ala	Ala	Thr	Gly	Val	Asp	Thr	Ile	Cys	Thr	His	Arg	Val	Asp
	4520					4525					4530			
Pro	Ile	Gly	Pro	Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr	Trp	Glu	Leu
	4535					4540					4545			
Ser	Gln	Leu	Thr	Asn	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu
	4550					4555					4560			
Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Asn	Pro	Trp	Ser	Ser
	4565					4570					4575			
Val	Pro	Thr	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	His	Leu	Ala
	4580					4585					4590			
Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu	Pro	Gly	His	Thr	Ala	Pro	Val
	4595					4600					4605			

Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr Asp Leu
 4610 4615 4620
 His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe Asn
 4625 4630 4635
 Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys
 4640 4645 4650
 Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu
 4655 4660 4665
 Leu Arg Pro Glu Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile
 4670 4675 4680
 Cys Thr Leu Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu
 4685 4690 4695
 Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser Val Thr Glu
 4700 4705 4710
 Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly
 4715 4720 4725
 Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr
 4730 4735 4740
 Ser Ala Val His Leu Glu Thr Ser Gly Thr Pro Ala Ser Leu Pro
 4745 4750 4755
 Gly His Thr Ala Pro Gly Pro Leu Leu Val Pro Phe Thr Leu Asn
 4760 4765 4770
 Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro
 4775 4780 4785
 Gly Ser Arg Lys Phe Ser Thr Thr Glu Arg Val Leu Gln Gly Leu
 4790 4795 4800
 Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser
 4805 4810 4815
 Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala Ala
 4820 4825 4830
 Thr Arg Val Asp Ala Val Cys Thr His Arg Pro Asp Pro Lys Ser
 4835 4840 4845
 Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln Leu
 4850 4855 4860
 Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg His
 4865 4870 4875
 Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser Ser Met Thr Thr
 4880 4885 4890
 Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg

4895
 Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg

4895	4900	4905
Thr Pro Ala Ser Leu Ser Gly 4910	Pro Thr Thr Ala Ser 4915	Pro Leu Leu 4920
Val Leu Phe Thr Ile Asn Phe 4925	Thr Ile Thr Asn Gln 4930	Arg Tyr Glu 4935
Glu Asn Met His His Pro Gly 4940	Ser Arg Lys Phe Asn 4945	Thr Thr Glu 4950
Arg Val Leu Gln Gly Leu Leu 4955	Arg Pro Val Phe Lys 4960	Asn Thr Ser 4965
Val Gly Pro Leu Tyr Ser Gly 4970	Cys Arg Leu Thr Leu 4975	Leu Arg Pro 4980
Lys Lys Asp Gly Ala Ala Thr 4985	Lys Val Asp Ala Ile 4990	Cys Thr Tyr 4995
Arg Pro Asp Pro Lys Ser Pro 5000	Gly Leu Asp Arg Glu 5005	Gln Leu Tyr 5010
Trp Glu Leu Ser Gln Leu Thr 5015	His Ser Ile Thr Glu 5020	Leu Gly Pro 5025
Tyr Thr Gln Asp Arg Asp Ser 5030	Leu Tyr Val Asn Gly 5035	Phe Thr His 5040
Arg Ser Ser Val Pro Thr Thr 5045	Ser Ile Pro Gly Thr 5050	Ser Ala Val 5055
His Leu Glu Thr Ser Gly Thr 5060	Pro Ala Ser Leu Pro 5065	Gly His Thr 5070
Ala Pro Gly Pro Leu Leu Val 5075	Pro Phe Thr Leu Asn 5080	Phe Thr Ile 5085
Thr Asn Leu Gln Tyr Glu Glu 5090	Asp Met Arg His Pro 5095	Gly Ser Arg 5100
Lys Phe Asn Thr Thr Glu Arg 5105	Val Leu Gln Gly Leu 5110	Leu Lys Pro 5115
Leu Phe Lys Ser Thr Ser Val 5120	Gly Pro Leu Tyr Ser 5125	Gly Cys Arg 5130
Leu Thr Leu Leu Arg Pro Glu 5135	Lys Arg Gly Ala Ala 5140	Thr Gly Val 5145
Asp Thr Ile Cys Thr His Arg 5150	Leu Asp Pro Leu Asn 5155	Pro Gly Leu 5160
Asp Arg Glu Gln Leu Tyr Trp 5165	Glu Leu Ser Lys Leu 5170	Thr Arg Gly 5175
Ile Ile Glu Leu Gly Pro Tyr 5180	Leu Leu Asp Arg Gly 5185	Ser Leu Tyr 5190

4895 4900 4905 4910 4915 4920 4925 4930 4935 4940 4945 4950 4955 4960 4965 4970 4975 4980 4985 4990 4995 5000 5005 5010 5015 5020 5025 5030 5035 5040 5045 5050 5055 5060 5065 5070 5075 5080 5085 5090 5095 5100 5105 5110 5115 5120 5125 5130 5135 5140 5145 5150 5155 5160 5165 5170 5175 5180 5185 5190

Val	Asn	Gly	Phe	Thr	His	Arg	Thr	Ser	Val	Pro	Thr	Thr	Ser	Thr
5195						5200					5205			
Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Phe
5210						5215					5220			
Ser	Leu	Pro	Ser	Pro	Ala	Xaa	Xaa	Xaa	Pro	Leu	Leu	Xaa	Pro	Phe
5225						5230					5235			
Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Xaa	Tyr	Glu	Glu	Xaa	Met
5240						5245					5250			
Xaa	Xaa	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu
5255						5260					5265			
Gln	Thr	Leu	Leu	Gly	Pro	Met	Phe	Lys	Asn	Thr	Ser	Val	Gly	Leu
5270						5275					5280			
Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Ser	Glu	Lys	Asp
5285						5290					5295			
Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Leu	Asp
5300						5305					5310			
Pro	Lys	Ser	Pro	Gly	Val	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu
5315						5320					5325			
Ser	Gln	Leu	Thr	Asn	Gly	Ile	Lys	Glu	Leu	Gly	Pro	Tyr	Thr	Leu
5330						5335					5340			
Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Trp	Ile	Pro
5345						5350					5355			
Val	Pro	Thr	Ser	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Gly
5360						5365					5370			
Ser	Gly	Thr	Pro	Ser	Leu	Pro	Ser	Ser	Pro	Thr	Thr	Ala	Gly	Pro
5375						5380					5385			
Leu	Leu	Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Lys
5390						5395					5400			
Tyr	Glu	Glu	Asp	Met	His	Cys	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr
5405						5410					5415			
Thr	Glu	Arg	Val	Leu	Gln	Ser	Leu	Leu	Gly	Pro	Met	Phe	Lys	Asn
5420						5425					5430			
Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu
5435						5440					5445			
Arg	Ser	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys
5450						5455					5460			
Thr	His	Arg	Leu	Asp	Pro	Lys	Ser	Pro	Gly	Val	Asp	Arg	Glu	Gln
5465						5470					5475			
Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	Asn	Gly	Ile	Lys	Glu	Leu
5480						5485					5490			

Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe
5495						5500					5505			
Thr	His	Gln	Thr	Ser	Ala	Pro	Asn	Thr	Ser	Thr	Pro	Gly	Thr	Ser
5510						5515					5520			
Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu	Pro	Ser
5525						5530					5535			
Pro	Thr	Xaa	Xaa	Xaa	Pro	Leu	Leu	Xaa	Pro	Phe	Thr	Leu	Asn	Phe
5540						5545					5550			
Thr	Ile	Thr	Asn	Leu	Xaa	Tyr	Glu	Glu	Xaa	Met	Xaa	Xaa	Pro	Gly
5555						5560					5565			
Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu
5570						5575					5580			
Xaa	Pro	Xaa	Phe	Lys	Xaa	Thr	Ser	Val	Gly	Xaa	Leu	Tyr	Ser	Gly
5585						5590					5595			
Cys	Arg	Leu	Thr	Leu	Leu	Arg	Xaa	Glu	Lys	Xaa	Xaa	Ala	Ala	Thr
5600						5605					5610			
Xaa	Val	Asp	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Asp	Pro	Xaa	Xaa	Pro
5615						5620					5625			
Gly	Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa	Leu	Thr
5630						5635					5640			
Xaa	Xaa	Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Xaa	Leu	Asp	Arg	Xaa	Ser
5645						5650					5655			
Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Trp	Ile	Pro	Val	Pro	Thr	Ser
5660						5665					5670			
Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Gly	Ser	Gly	Thr	Pro
5675						5680					5685			
Ser	Ser	Leu	Pro	Ser	Pro	Thr	Thr	Ala	Gly	Pro	Leu	Leu	Val	Pro
5690						5695					5700			
Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Lys	Tyr	Glu	Glu	Asp
5705						5710					5715			
Met	His	Cys	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val
5720						5725					5730			
Leu	Gln	Ser	Leu	Leu	Gly	Pro	Met	Phe	Lys	Asn	Thr	Ser	Val	Gly
5735						5740					5745			
Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Ser	Leu	Arg	Ser	Glu	Lys
5750						5755					5760			
Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Val
5765						5770					5775			
Asp	Pro	Lys	Ser	Pro	Gly	Val	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu

	5780					5785					5790				
Leu	Ser 5795	Gln	Leu	Thr	Asn	Gly 5800	Ile	Lys	Glu	Leu	Gly 5805	Pro	Tyr	Thr	
Leu	Asp 5810	Arg	Asn	Ser	Leu	Tyr 5815	Val	Asn	Gly	Phe	Thr 5820	His	Gln	Thr	
Ser	Ala 5825	Pro	Asn	Thr	Ser	Thr 5830	Pro	Gly	Thr	Ser	Thr 5835	Val	Asp	Leu	
Gly	Thr 5840	Ser	Gly	Thr	Pro	Ser 5845	Ser	Leu	Pro	Ser	Pro 5850	Thr	Ser	Ala	
Gly	Pro 5855	Leu	Leu	Val	Pro	Phe 5860	Thr	Leu	Asn	Phe	Thr 5865	Ile	Thr	Asn	
Leu	Gln 5870	Tyr	Glu	Glu	Asp	Met 5875	His	His	Pro	Gly	Ser 5880	Arg	Lys	Phe	
Asn	Thr 5885	Thr	Glu	Arg	Val	Leu 5890	Gln	Gly	Leu	Leu	Gly 5895	Pro	Met	Phe	
Lys	Asn 5900	Thr	Ser	Val	Gly	Leu 5905	Leu	Tyr	Ser	Gly	Cys 5910	Arg	Leu	Thr	
Leu	Leu 5915	Arg	Pro	Glu	Lys	Asn 5920	Gly	Ala	Ala	Thr	Gly 5925	Met	Asp	Ala	
Ile	Cys 5930	Thr	His	Arg	Leu	Asp 5935	Pro	Lys	Ser	Pro	Gly 5940	Leu	Asp	Arg	
Glu	Xaa 5945	Leu	Tyr	Trp	Glu	Leu 5950	Ser	Xaa	Leu	Thr	Xaa 5955	Xaa	Ile	Xaa	
Glu	Leu 5960	Gly	Pro	Tyr	Xaa	Leu 5965	Asp	Arg	Xaa	Ser	Leu 5970	Tyr	Val	Asn	
Gly	Phe 5975	Xaa	Xaa	Xaa	Xaa	Xaa 5980	Xaa	Xaa	Xaa	Thr	Ser 5985	Thr	Pro	Gly	
Thr	Ser 5990	Xaa	Val	Xaa	Leu	Xaa 5995	Thr	Ser	Gly	Thr	Pro 6000	Xaa	Xaa	Xaa	
Pro	Xaa 6005	Xaa	Thr	Xaa	Xaa	Xaa 6010	Pro	Leu	Leu	Xaa	Pro 6015	Phe	Thr	Leu	
Asn	Phe 6020	Thr	Ile	Thr	Asn	Leu 6025	Xaa	Tyr	Glu	Glu	Xaa 6030	Met	Xaa	Xaa	
Pro	Gly 6035	Ser	Arg	Lys	Phe	Asn 6040	Thr	Thr	Glu	Arg	Val 6045	Leu	Gln	Gly	
Leu	Leu 6050	Lys	Pro	Leu	Phe	Arg 6055	Asn	Ser	Ser	Leu	Glu 6060	Tyr	Leu	Tyr	
Ser	Gly 6065	Cys	Arg	Leu	Ala	Ser 6070	Leu	Arg	Pro	Glu	Lys 6075	Asp	Ser	Ser	

Ala Met 6080	Ala Val Asp Ala Ile 6085	Cys Thr His Arg Pro 6090	Asp Pro Glu
Asp Leu 6095	Gly Leu Asp Arg Glu 6100	Arg Leu Tyr Trp Glu 6105	Leu Ser Asn
Leu Thr 6110	Asn Gly Ile Gln Glu 6115	Leu Gly Pro Tyr Thr 6120	Leu Asp Arg
Asn Ser 6125	Leu Tyr Val Asn Gly 6130	Phe Thr His Arg Ser 6135	Ser Met Pro
Thr Thr 6140	Ser Thr Pro Gly Thr 6145	Ser Thr Val Asp Val 6150	Gly Thr Ser
Gly Thr 6155	Pro Ser Ser Ser Pro 6160	Ser Pro Thr Thr Ala 6165	Gly Pro Leu
Leu Ile 6170	Pro Phe Thr Leu Asn 6175	Phe Thr Ile Thr Asn 6180	Leu Gln Tyr
Gly Glu 6185	Asp Met Gly His Pro 6190	Gly Ser Arg Lys Phe 6195	Asn Thr Thr
Glu Arg 6200	Val Leu Gln Gly Leu 6205	Leu Gly Pro Ile Phe 6210	Lys Asn Thr
Ser Val 6215	Gly Pro Leu Tyr Ser 6220	Gly Cys Arg Leu Thr 6225	Ser Leu Arg
Ser Glu 6230	Lys Asp Gly Ala Ala 6235	Thr Gly Val Asp Ala 6240	Ile Cys Ile
His His 6245	Leu Asp Pro Lys Ser 6250	Pro Gly Leu Asn Arg 6255	Glu Arg Leu
Tyr Trp 6260	Glu Leu Ser Gln Leu 6265	Thr Asn Gly Ile Lys 6270	Glu Leu Gly
Pro Tyr 6275	Thr Leu Asp Arg Asn 6280	Ser Leu Tyr Val Asn 6285	Gly Phe Thr
His Arg 6290	Thr Ser Val Pro Thr 6295	Thr Ser Thr Pro Gly 6300	Thr Ser Thr
Val Asp 6305	Leu Gly Thr Ser Gly 6310	Thr Pro Phe Ser Leu 6315	Pro Ser Pro
Ala Thr 6320	Ala Gly Pro Leu Leu 6325	Val Leu Phe Thr Leu 6330	Asn Phe Thr
Ile Thr 6335	Asn Leu Lys Tyr Glu 6340	Glu Asp Met His Arg 6345	Pro Gly Ser
Arg Lys 6350	Phe Asn Thr Thr Glu 6355	Arg Val Leu Gln Thr 6360	Leu Leu Gly
Pro Met 6365	Phe Lys Asn Thr Ser 6370	Val Gly Leu Leu Tyr 6375	Ser Gly Cys

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Arg	Leu	Thr	Leu	Leu	Arg	Ser	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly
6380						6385					6390			
Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Leu	Asp	Pro	Lys	Ser	Pro	Gly
6395						6400					6405			
Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa	Leu	Thr	Xaa
6410						6415					6420			
Xaa	Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Xaa	Leu	Asp	Arg	Xaa	Ser	Leu
6425						6430					6435			
Tyr	Val	Asn	Gly	Phe	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Thr	Ser
6440						6445					6450			
Thr	Pro	Gly	Thr	Ser	Xaa	Val	Xaa	Leu	Xaa	Thr	Ser	Gly	Thr	Pro
6455						6460					6465			
Xaa	Xaa	Xaa	Pro	Xaa	Xaa	Thr	Xaa	Xaa	Xaa	Pro	Leu	Leu	Xaa	Pro
6470						6475					6480			
Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Xaa	Tyr	Glu	Glu	Xaa
6485						6490					6495			
Met	Xaa	Xaa	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val
6500						6505					6510			
Leu	Gln	Gly	Leu	Leu	Arg	Pro	Val	Phe	Lys	Asn	Thr	Ser	Val	Gly
6515						6520					6525			
Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Lys	Lys
6530						6535					6540			
Asp	Gly	Ala	Ala	Thr	Lys	Val	Asp	Ala	Ile	Cys	Thr	Tyr	Arg	Pro
6545						6550					6555			
Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu
6560						6565					6570			
Leu	Ser	Gln	Leu	Thr	His	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr
6575						6580					6585			
Gln	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser
6590						6595					6600			
Ser	Val	Pro	Thr	Thr	Ser	Ile	Pro	Gly	Thr	Ser	Ala	Val	His	Leu
6605						6610					6615			
Glu	Thr	Thr	Gly	Thr	Pro	Ser	Ser	Phe	Pro	Gly	His	Thr	Glu	Pro
6620						6625					6630			
Gly	Pro	Leu	Leu	Ile	Pro	Phe	Thr	Phe	Asn	Phe	Thr	Ile	Thr	Asn
6635						6640					6645			
Leu	Arg	Tyr	Glu	Glu	Asn	Met	Gln	His	Pro	Gly	Ser	Arg	Lys	Phe
6650						6655					6660			
Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Thr	Pro	Leu	Phe

6665	6670	6675
Lys Asn Thr Ser Val Gly Pro 6680	Leu Tyr Ser Gly Cys Arg Leu Thr 6685	
Leu Leu Arg Pro Glu Lys Gln 6695	Glu Ala Ala Thr Gly Val Asp Thr 6700	
Ile Cys Thr His Arg Val Asp 6710	Pro Ile Gly Pro Gly Leu Asp Arg 6720	
Glu Arg Leu Tyr Trp Glu Leu 6725	Ser Gln Leu Thr Asn Ser Ile Thr 6730	
Glu Leu Gly Pro Tyr Thr Leu 6740	Asp Arg Asp Ser Leu Tyr Val Asp 6750	
Gly Phe Asn Pro Trp Ser Ser 6755	Val Pro Thr Thr Ser Thr Pro Gly 6760	
Thr Ser Thr Val His Leu Ala 6770	Thr Ser Gly Thr Pro Ser Pro Leu 6775	
Pro Gly His Thr Ala Pro Val 6785	Pro Leu Leu Ile Pro Phe Thr Leu 6790	
Asn Phe Thr Ile Thr Asp Leu 6800	His Tyr Glu Glu Asn Met Gln His 6810	
Pro Gly Ser Arg Lys Phe Asn 6815	Thr Thr Glu Arg Val Leu Gln Gly 6820	
Leu Leu Lys Pro Leu Phe Lys 6830	Ser Thr Ser Val Gly Pro Leu Tyr 6835	
Ser Gly Cys Arg Leu Thr Leu 6845	Leu Arg Pro Glu Lys His Gly Ala 6850	
Ala Thr Gly Val Asp Ala Ile 6860	Cys Thr Leu Arg Leu Asp Pro Thr 6865	
Gly Pro Gly Leu Asp Arg Glu 6875	Arg Leu Tyr Trp Glu Leu Ser Gln 6880	
Leu Thr Asn Ser Ile Thr Glu 6890	Leu Gly Pro Tyr Thr Leu Asp Arg 6895	
Asp Ser Leu Tyr Val Asn Gly 6905	Phe Asn Pro Trp Ser Ser Val Pro 6910	
Thr Thr Ser Thr Pro Gly Thr 6920	Ser Thr Val His Leu Ala Thr Ser 6925	
Gly Thr Pro Ser Ser Leu Pro 6935	Gly His Thr Thr Ala Gly Pro Leu 6940	
Leu Val Pro Phe Thr Leu Asn 6950	Phe Thr Ile Thr Asn Leu Lys Tyr 6955	

6666 6671 6676 6681 6686 6691 6696 6701 6706 6711 6716 6721 6726 6731 6736 6741 6746 6751 6756 6761 6766 6771 6776 6781 6786 6791 6796 6801 6806 6811 6816 6821 6826 6831 6836 6841 6846 6851 6856 6861 6866 6871 6876 6881 6886 6891 6896 6901 6906 6911 6916 6921 6926 6931 6936 6941 6946 6951 6956 6961

Glu Glu Asp Met His Cys Pro Gly Ser Arg Lys Phe Asn Thr Thr
 6965 6970 6975
 Glu Arg Val Leu Gln Ser Leu His Gly Pro Met Phe Lys Asn Thr
 6980 6985 6990
 Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg
 6995 7000 7005
 Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr
 7010 7015 7020
 His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Xaa Leu
 7025 7030 7035
 Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly
 7040 7045 7050
 Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu Tyr Val Asn Gly Phe Xaa
 7055 7060 7065
 Xaa Xaa Xaa Xaa Xaa Xaa Thr Ser Thr Pro Gly Thr Ser Xaa
 7070 7075 7080
 Val Xaa Leu Xaa Thr Ser Gly Thr Pro Xaa Xaa Xaa Pro Xaa Xaa
 7085 7090 7095
 Thr Xaa Xaa Xaa Pro Leu Leu Xaa Pro Phe Thr Leu Asn Phe Thr
 7100 7105 7110
 Ile Thr Asn Leu Xaa Tyr Glu Glu Xaa Met Xaa Xaa Pro Gly Ser
 7115 7120 7125
 Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Xaa
 7130 7135 7140
 Pro Xaa Phe Lys Xaa Thr Ser Val Gly Xaa Leu Tyr Ser Gly Cys
 7145 7150 7155
 Arg Leu Thr Leu Leu Arg Xaa Glu Lys Xaa Xaa Ala Ala Thr Xaa
 7160 7165 7170
 Val Asp Xaa Xaa Cys Xaa Xaa Xaa Xaa Asp Pro Xaa Xaa Pro Gly
 7175 7180 7185
 Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr Asn
 7190 7195 7200
 Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu
 7205 7210 7215
 Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser
 7220 7225 7230
 Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly Thr Pro
 7235 7240 7245
 Ala Ser Leu Pro Gly His Thr Ala Pro Gly Pro Leu Leu Val Pro
 7250 7255 7260

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Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp
 7265 7270 7275
 Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val
 7280 7285 7290
 Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly
 7295 7300 7305
 Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys
 7310 7315 7320
 Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu
 7325 7330 7335
 Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu
 7340 7345 7350
 Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa
 7355 7360 7365
 Leu Asp Arg Xaa Ser Leu Tyr Val Asn Gly Phe Xaa Xaa Xaa Xaa
 7370 7375 7380
 Xaa Xaa Xaa Xaa Thr Ser Thr Pro Gly Thr Ser Xaa Val Xaa Leu
 7385 7390 7395
 Xaa Thr Ser Gly Thr Pro Xaa Xaa Xaa Pro Xaa Xaa Thr Xaa Xaa
 7400 7405 7410
 Xaa Pro Leu Leu Xaa Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn
 7415 7420 7425
 Leu Xaa Tyr Glu Glu Xaa Met Xaa Xaa Pro Gly Ser Arg Lys Phe
 7430 7435 7440
 Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Xaa Pro Xaa Phe
 7445 7450 7455
 Lys Xaa Thr Ser Val Gly Xaa Leu Tyr Ser Gly Cys Arg Leu Thr
 7460 7465 7470
 Leu Leu Arg Xaa Glu Lys Xaa Xaa Ala Ala Thr Xaa Val Asp Xaa
 7475 7480 7485
 Xaa Cys Xaa Xaa Xaa Xaa Asp Pro Xaa Xaa Pro Gly Leu Asp Arg
 7490 7495 7500
 Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa
 7505 7510 7515
 Glu Leu Gly Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu Tyr Val Asn
 7520 7525 7530
 Gly Phe His Pro Arg Ser Ser Val Pro Thr Thr Ser Thr Pro Gly
 7535 7540 7545
 Thr Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser Leu

7550	7555	7560
Pro Gly His Thr Ala Pro Val	Pro Leu Leu Ile Pro Phe Thr Leu	
7565	7570	7575
Asn Phe Thr Ile Thr Asn Leu	His Tyr Glu Glu Asn Met Gln His	
7580	7585	7590
Pro Gly Ser Arg Lys Phe Asn	Thr Thr Glu Arg Val Leu Gln Gly	
7595	7600	7605
Leu Leu Gly Pro Met Phe Lys	Asn Thr Ser Val Gly Leu Leu Tyr	
7610	7615	7620
Ser Gly Cys Arg Leu Thr Leu	Leu Arg Pro Glu Lys Asn Gly Ala	
7625	7630	7635
Ala Thr Gly Met Asp Ala Ile	Cys Ser His Arg Leu Asp Pro Lys	
7640	7645	7650
Ser Pro Gly Leu Asp Arg Glu	Xaa Leu Tyr Trp Glu Leu Ser Xaa	
7655	7660	7665
Leu Thr Xaa Xaa Ile Xaa Glu	Leu Gly Pro Tyr Xaa Leu Asp Arg	
7670	7675	7680
Xaa Ser Leu Tyr Val Asn Gly	Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa	
7685	7690	7695
Xaa Thr Ser Thr Pro Gly Thr	Ser Xaa Val Xaa Leu Xaa Thr Ser	
7700	7705	7710
Gly Thr Pro Xaa Xaa Xaa Pro	Xaa Xaa Thr Xaa Xaa Xaa Pro Leu	
7715	7720	7725
Leu Xaa Pro Phe Thr Leu Asn	Phe Thr Ile Thr Asn Leu Xaa Tyr	
7730	7735	7740
Glu Glu Xaa Met Xaa Xaa Pro	Gly Ser Arg Lys Phe Asn Thr Thr	
7745	7750	7755
Glu Arg Val Leu Gln Gly Leu	Leu Xaa Pro Xaa Phe Lys Xaa Thr	
7760	7765	7770
Ser Val Gly Xaa Leu Tyr Ser	Gly Cys Arg Leu Thr Leu Leu Arg	
7775	7780	7785
Xaa Glu Lys Xaa Xaa Ala Ala	Thr Xaa Val Asp Xaa Xaa Cys Xaa	
7790	7795	7800
Xaa Xaa Xaa Asp Pro Xaa Xaa	Pro Gly Leu Asp Arg Glu Xaa Leu	
7805	7810	7815
Tyr Trp Glu Leu Ser Xaa Leu	Thr Xaa Xaa Ile Xaa Glu Leu Gly	
7820	7825	7830
Pro Tyr Xaa Leu Asp Arg Xaa	Ser Leu Tyr Val Asn Gly Phe Thr	
7835	7840	7845

7550 7555 7560

His	Gln	Asn	Ser	Val	Pro	Thr	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr
7850						7855					7860			
Val	Tyr	Trp	Ala	Thr	Thr	Gly	Thr	Pro	Ser	Ser	Phe	Pro	Gly	His
7865						7870					7875			
Thr	Glu	Pro	Gly	Pro	Leu	Leu	Ile	Pro	Phe	Thr	Phe	Asn	Phe	Thr
7880						7885					7890			
Ile	Thr	Asn	Leu	His	Tyr	Glu	Glu	Asn	Met	Gln	His	Pro	Gly	Ser
7895						7900					7905			
Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Thr
7910						7915					7920			
Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys
7925						7930					7935			
Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Gln	Glu	Ala	Ala	Thr	Gly
7940						7945					7950			
Val	Asp	Thr	Ile	Cys	Thr	His	Arg	Val	Asp	Pro	Ile	Gly	Pro	Gly
7955						7960					7965			
Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa	Leu	Thr	Xaa
7970						7975					7980			
Xaa	Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Xaa	Leu	Asp	Arg	Xaa	Ser	Leu
7985						7990					7995			
Tyr	Val	Asn	Gly	Phe	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Thr	Ser
8000						8005					8010			
Thr	Pro	Gly	Thr	Ser	Xaa	Val	Xaa	Leu	Xaa	Thr	Ser	Gly	Thr	Pro
8015						8020					8025			
Xaa	Xaa	Xaa	Pro	Xaa	Xaa	Thr	Xaa	Xaa	Xaa	Pro	Leu	Leu	Xaa	Pro
8030						8035					8040			
Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Xaa	Tyr	Glu	Glu	Xaa
8045						8050					8055			
Met	Xaa	Xaa	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val
8060						8065					8070			
Leu	Gln	Gly	Leu	Leu	Xaa	Pro	Xaa	Phe	Lys	Xaa	Thr	Ser	Val	Gly
8075						8080					8085			
Xaa	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Xaa	Glu	Lys
8090						8095					8100			
Xaa	Xaa	Ala	Ala	Thr	Xaa	Val	Asp	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa
8105						8110					8115			
Asp	Pro	Xaa	Xaa	Pro	Gly	Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu
8120						8125					8130			
Leu	Ser	Xaa	Leu	Thr	Xaa	Xaa	Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Xaa
8135						8140					8145			

Leu Asp Arg Xaa Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser
 8150 8155 8160
 Ser Val Pro Thr Thr Ser Ser Pro Gly Thr Ser Thr Val His Leu
 8165 8170 8175
 Ala Thr Ser Gly Thr Pro Ser Ser Leu Pro Gly His Thr Ala Pro
 8180 8185 8190
 Val Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn
 8195 8200 8205
 Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe
 8210 8215 8220
 Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe
 8225 8230 8235
 Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr
 8240 8245 8250
 Leu Leu Arg Pro Glu Lys His Gly Ala Ala Thr Gly Val Asp Ala
 8255 8260 8265
 Ile Cys Thr Leu Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp Arg
 8270 8275 8280
 Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa
 8285 8290 8295
 Glu Leu Gly Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu Tyr Val Asn
 8300 8305 8310
 Gly Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Thr Ser Thr Pro Gly
 8315 8320 8325
 Thr Ser Xaa Val Xaa Leu Xaa Thr Ser Gly Thr Pro Xaa Xaa Xaa
 8330 8335 8340
 Pro Xaa Xaa Thr Xaa Xaa Xaa Pro Leu Leu Xaa Pro Phe Thr Leu
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 Asn Phe Thr Ile Thr Asn Leu Xaa Tyr Glu Glu Xaa Met Xaa Xaa
 8360 8365 8370
 Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly
 8375 8380 8385
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 Ser Gly Cys Arg Leu Thr Leu Leu Arg Xaa Glu Lys Xaa Xaa Ala
 8405 8410 8415
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 8420 8425 8430
 Xaa Pro Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa

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8435		8440		8445
Leu Thr Xaa Xaa Ile Xaa Glu	Leu Gly Pro Tyr Xaa	Leu Asp Arg		
8450	8455	8460		
Xaa Ser Leu Tyr Val Asn Gly	Phe Thr His Arg Thr	Ser Val Pro		
8465	8470	8475		
Thr Thr Ser Thr Pro Gly Thr	Ser Thr Val His Leu	Ala Thr Ser		
8480	8485	8490		
Gly Thr Pro Ser Ser Leu Pro	Gly His Thr Ala Pro	Val Pro Leu		
8495	8500	8505		
Leu Ile Pro Phe Thr Leu Asn	Phe Thr Ile Thr Asn	Leu Gln Tyr		
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Glu Glu Asp Met His Arg Pro	Gly Ser Arg Lys Phe	Asn Thr Thr		
8525	8530	8535		
Glu Arg Val Leu Gln Gly Leu	Leu Ser Pro Ile Phe	Lys Asn Ser		
8540	8545	8550		
Ser Val Gly Pro Leu Tyr Ser	Gly Cys Arg Leu Thr	Ser Leu Arg		
8555	8560	8565		
Pro Glu Lys Asp Gly Ala Ala	Thr Gly Met Asp Ala	Val Cys Leu		
8570	8575	8580		
Tyr His Pro Asn Pro Lys Arg	Pro Gly Leu Asp Arg	Glu Gln Leu		
8585	8590	8595		
Tyr Cys Glu Leu Ser Gln Leu	Thr His Asn Ile Thr	Glu Leu Gly		
8600	8605	8610		
Pro Tyr Ser Leu Asp Arg Asp	Ser Leu Tyr Val Asn	Gly Phe Thr		
8615	8620	8625		
His Gln Asn Ser Val Pro Thr	Thr Ser Thr Pro Gly	Thr Ser Thr		
8630	8635	8640		
Val Tyr Trp Ala Thr Thr Gly	Thr Pro Ser Ser Phe	Pro Gly His		
8645	8650	8655		
Thr Xaa Xaa Xaa Pro Leu Leu	Xaa Pro Phe Thr Leu	Asn Phe Thr		
8660	8665	8670		
Ile Thr Asn Leu Xaa Tyr Glu	Glu Xaa Met Xaa Xaa	Pro Gly Ser		
8675	8680	8685		
Arg Lys Phe Asn Thr Thr Glu	Arg Val Leu Gln Gly	Leu Leu Xaa		
8690	8695	8700		
Pro Xaa Phe Lys Xaa Thr Ser	Val Gly Xaa Leu Tyr	Ser Gly Cys		
8705	8710	8715		
Arg Leu Thr Leu Leu Arg Xaa	Glu Lys Xaa Xaa Ala	Ala Thr Xaa		
8720	8725	8730		

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Val Asp Xaa Xaa Cys Xaa Xaa Xaa Xaa Asp Pro Xaa Xaa Pro Gly
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 Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa
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 Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu
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 Tyr Val Asn Gly Phe Thr His Trp Ser Ser Gly Leu Thr Thr Ser
 8780 8785 8790
 Thr Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro
 8795 8800 8805
 Ser Pro Val Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Val Pro
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 Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp
 8825 8830 8835
 Met His Arg Pro Gly Ser Arg Lys Phe Asn Ala Thr Glu Arg Val
 8840 8845 8850
 Leu Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Thr Ser Val Gly
 8855 8860 8865
 Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys
 8870 8875 8880
 Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Val
 8885 8890 8895
 Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu
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 Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa
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 Leu Asp Arg Xaa Ser Leu Tyr Val Asn Gly Phe Xaa Xaa Xaa Xaa
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 Xaa Xaa Xaa Xaa Thr Ser Thr Pro Gly Thr Ser Xaa Val Xaa Leu
 8945 8950 8955
 Xaa Thr Ser Gly Thr Pro Xaa Xaa Xaa Pro Xaa Xaa Thr Xaa Xaa
 8960 8965 8970
 Xaa Pro Leu Leu Xaa Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn
 8975 8980 8985
 Leu Xaa Tyr Glu Glu Xaa Met Xaa Xaa Pro Gly Ser Arg Lys Phe
 8990 8995 9000
 Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Xaa Pro Xaa Phe
 9005 9010 9015
 Lys Xaa Thr Ser Val Gly Xaa Leu Tyr Ser Gly Cys Arg Leu Thr
 9020 9025 9030

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Leu Leu Arg Xaa Glu Lys Xaa Xaa Ala Ala Thr Xaa Val Asp Xaa
 9035 9040 9045
 Xaa Cys Xaa Xaa Xaa Xaa Asp Pro Xaa Xaa Pro Gly Leu Asp Arg
 9050 9055 9060
 Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa
 9065 9070 9075
 Glu Leu Gly Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu Tyr Val Asn
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 Gly Phe Thr His Arg Ser Phe Gly Leu Thr Thr Ser Thr Pro Trp
 9095 9100 9105
 Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Pro Val
 9110 9115 9120
 Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu
 9125 9130 9135
 Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met His Arg
 9140 9145 9150
 Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly
 9155 9160 9165
 Leu Leu Thr Pro Leu Phe Arg Asn Thr Ser Val Ser Ser Leu Tyr
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 Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala
 9185 9190 9195
 Ala Thr Arg Val Asp Ala Val Cys Thr His Arg Pro Asp Pro Lys
 9200 9205 9210
 Ser Pro Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa
 9215 9220 9225
 Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa Leu Asp Arg
 9230 9235 9240
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 9245 9250 9255
 Xaa Thr Ser Thr Pro Gly Thr Ser Xaa Val Xaa Leu Xaa Thr Ser
 9260 9265 9270
 Gly Thr Pro Xaa Xaa Xaa Pro Xaa Xaa Thr Xaa Xaa Xaa Pro Leu
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 Leu Xaa Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Xaa Tyr
 9290 9295 9300
 Glu Glu Xaa Met Xaa Xaa Pro Gly Ser Arg Lys Phe Asn Thr Thr
 9305 9310 9315
 Glu Arg Val Leu Gln Gly Leu Leu Xaa Pro Xaa Phe Lys Xaa Thr

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9335						9340					9345			
Xaa	Glu	Lys	Xaa	Xaa	Ala	Ala	Thr	Xaa	Val	Asp	Xaa	Xaa	Cys	Xaa
9350					9355						9360			
Xaa	Xaa	Xaa	Asp	Pro	Xaa	Xaa	Pro	Gly	Leu	Asp	Arg	Glu	Xaa	Leu
9365					9370						9375			
Tyr	Trp	Glu	Leu	Ser	Xaa	Leu	Thr	Xaa	Xaa	Ile	Xaa	Glu	Leu	Gly
9380					9385						9390			
Pro	Tyr	Xaa	Leu	Asp	Arg	Xaa	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr
9395					9400						9405			
His	Trp	Ile	Pro	Val	Pro	Thr	Ser	Ser	Thr	Pro	Gly	Thr	Ser	Thr
9410					9415						9420			
Val	Asp	Leu	Gly	Ser	Gly	Thr	Pro	Ser	Ser	Leu	Pro	Ser	Pro	Thr
9425					9430						9435			
Thr	Ala	Gly	Pro	Leu	Leu	Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile
9440					9445						9450			
Thr	Asn	Leu	Gln	Tyr	Gly	Glu	Asp	Met	Gly	His	Pro	Gly	Ser	Arg
9455					9460						9465			
Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Gly	Pro
9470					9475						9480			
Ile	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg
9485					9490						9495			
Leu	Thr	Ser	Leu	Arg	Ser	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly	Val
9500					9505						9510			
Asp	Ala	Ile	Cys	Ile	His	His	Leu	Asp	Pro	Lys	Ser	Pro	Gly	Leu
9515					9520						9525			
Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa	Leu	Thr	Xaa	Xaa
9530					9535						9540			
Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Xaa	Leu	Asp	Arg	Xaa	Ser	Leu	Tyr
9545					9550						9555			
Val	Asn	Gly	Phe	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Thr	Ser	Thr	
9560					9565						9570			
Pro	Gly	Thr	Ser	Xaa	Val	Xaa	Leu	Xaa	Thr	Ser	Gly	Thr	Pro	Xaa
9575					9580						9585			
Xaa	Xaa	Pro	Xaa	Xaa	Thr	Xaa	Xaa	Pro	Leu	Leu	Xaa	Pro	Phe	
9590					9595						9600			
Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Xaa	Tyr	Glu	Glu	Xaa	Met
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Xaa Xaa Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu
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 Gln Gly Leu Leu Xaa Pro Xaa Phe Lys Xaa Thr Ser Val Gly Xaa
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 Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Xaa Glu Lys Xaa
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 Asp Arg Xaa Ser Leu Tyr Val Asn Gly Phe Thr His Gln Thr Phe
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 Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys Phe Asn
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 9785 9790 9795
 Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu
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 Leu Arg Pro Glu Lys Asn Gly Ala Ala Thr Arg Val Asp Ala Val
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 Cys Thr His Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu
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 9845 9850 9855
 Leu Gly Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu Tyr Val Asn Gly
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 Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa Thr Ser Thr Pro Gly Thr
 9875 9880 9885
 Ser Xaa Val Xaa Leu Xaa Thr Ser Gly Thr Pro Xaa Xaa Xaa Pro
 9890 9895 9900
 Xaa Xaa Thr Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu Asn
 9905 9910 9915

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10205	10210	10215
Val Pro Gly Pro Leu Leu 10220	Val Pro Phe Thr Leu 10225	Asn Phe Thr Ile 10230
Thr Asn Leu Gln Tyr Glu 10235	Glu Ala Met Arg His 10240	Pro Gly Ser Arg 10245
Lys Phe Asn Thr Thr Glu 10250	Arg Val Leu Gln Gly 10255	Leu Leu Arg Pro 10260
Leu Phe Lys Asn Thr Ser 10265	Ile Gly Pro Leu Tyr 10270	Ser Ser Cys Arg 10275
Leu Thr Leu Leu Arg Pro 10280	Glu Lys Asp Lys Ala 10285	Ala Thr Arg Val 10290
Asp Ala Ile Cys Thr His 10295	His Pro Asp Pro Gln 10300	Ser Pro Gly Leu 10305
Asn Arg Glu Gln Leu Tyr 10310	Trp Glu Leu Ser Gln 10315	Leu Thr His Gly 10320
Ile Thr Glu Leu Gly Pro 10325	Tyr Thr Leu Asp Arg 10330	Asp Ser Leu Tyr 10335
Val Asp Gly Phe Thr His 10340	Trp Ser Pro Ile Pro 10345	Thr Thr Ser Thr 10350
Pro Gly Thr Ser Ile Val 10355	Asn Leu Gly Thr Ser 10360	Gly Ile Pro Pro 10365
Ser Leu Pro Glu Thr Thr 10370	Xaa Xaa Xaa Pro Leu 10375	Leu Xaa Pro Phe 10380
Thr Leu Asn Phe Thr Ile 10385	Thr Asn Leu Xaa Tyr 10390	Glu Glu Xaa Met 10395
Xaa Xaa Pro Gly Ser Arg 10400	Lys Phe Asn Thr Thr 10405	Glu Arg Val Leu 10410
Gln Gly Leu Leu Lys Pro 10415	Leu Phe Lys Ser Thr 10420	Ser Val Gly Pro 10425
Leu Tyr Ser Gly Cys Arg 10430	Leu Thr Leu Leu Arg 10435	Pro Glu Lys Asp 10440
Gly Val Ala Thr Arg Val 10445	Asp Ala Ile Cys Thr 10450	His Arg Pro Asp 10455
Pro Lys Ile Pro Gly Leu 10460	Asp Arg Gln Gln Leu 10465	Tyr Trp Glu Leu 10470
Ser Gln Leu Thr His Ser 10475	Ile Thr Glu Leu Gly 10480	Pro Tyr Thr Leu 10485
Asp Arg Asp Ser Leu Tyr 10490	Val Asn Gly Phe Thr 10495	Gln Arg Ser Ser 10500

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Val	Pro	Thr	Thr	Ser	Thr	Pro	Gly	Thr	Phe	Thr	Val	Gln	Pro	Glu
10505						10510					10515			
Thr	Ser	Glu	Thr	Pro	Ser	Ser	Leu	Pro	Gly	Pro	Thr	Ala	Thr	Gly
10520						10525					10530			
Pro	Val	Leu	Leu	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu
10535						10540					10545			
Gln	Tyr	Glu	Glu	Asp	Met	His	Arg	Pro	Gly	Ser	Arg	Lys	Phe	Asn
10550						10555					10560			
Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Met	Pro	Leu	Phe	Lys
10565						10570					10575			
Asn	Thr	Ser	Val	Ser	Ser	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu
10580						10585					10590			
Leu	Arg	Pro	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Arg	Val	Asp	Ala	Val
10595						10600					10605			
Cys	Thr	His	Arg	Pro	Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asp	Arg	Glu
10610						10615					10620			
Arg	Leu	Tyr	Trp	Lys	Leu	Ser	Gln	Leu	Thr	His	Gly	Ile	Thr	Glu
10625						10630					10635			
Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	His	Ser	Leu	Tyr	Val	Asn	Gly
10640						10645					10650			
Phe	Thr	His	Gln	Ser	Ser	Met	Thr	Thr	Thr	Arg	Thr	Pro	Asp	Thr
10655						10660					10665			
Ser	Thr	Met	His	Leu	Ala	Thr	Ser	Arg	Thr	Pro	Ala	Ser	Leu	Ser
10670						10675					10680			
Gly	Pro	Thr	Thr	Ala	Ser	Pro	Leu	Leu	Val	Leu	Phe	Thr	Ile	Asn
10685						10690					10695			
Phe	Thr	Ile	Thr	Asn	Leu	Arg	Tyr	Glu	Glu	Asn	Met	His	His	Pro
10700						10705					10710			
Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu
10715						10720					10725			
Leu	Arg	Pro	Val	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser
10730						10735					10740			
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10745						10750					10755			
Thr	Lys	Val	Asp	Ala	Ile	Cys	Thr	Tyr	Arg	Pro	Asp	Pro	Lys	Ser
10760						10765					10770			
Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu
10775						10780					10785			
Thr	His	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Gln	Asp	Arg	Asp
10790						10795					10800			

Ser Leu Tyr Asn Val Gly Phe Thr Gln Arg Ser Ser Val Pro Thr
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 Val Leu Phe Thr Leu Asn Gly Thr Ile Thr Asn Leu Arg Tyr Glu
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 Glu Lys Asp Gly Thr Ala Thr Gly Val Asp Ala Ile Cys Thr His
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 Tyr Ala Leu Asp Asn Asp Ser Leu Phe Val Asn Gly Phe Thr His
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 Arg Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Pro Thr Val
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 Tyr Leu Gly Ala Ser Lys Thr Pro Ala Ser Ile Phe Gly Pro Ser
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 11015 11020 11025
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 11075 11080 11085
 Arg Glu Gln Leu Tyr Leu Glu Leu Ser Gln Leu Thr His Ser Ile

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Asn Gly Phe Thr His Arg Ser 11120	Ser Val Pro Thr Thr 11125	Ser Thr Gly 11130
Val Val Ser Glu Glu Pro Phe 11135	Thr Leu Asn Phe Thr 11140	Ile Asn Asn 11145
Leu Arg Tyr Met Ala Asp Met 11150	Gly Gln Pro Gly Ser 11155	Leu Lys Phe 11160
Asn Ile Thr Asp Asn Val Met 11165	Lys His Leu Leu Ser 11170	Pro Leu Phe 11175
Gln Arg Ser Ser Leu Gly Ala 11180	Arg Tyr Thr Gly Cys 11185	Arg Val Ile 11190
Ala Leu Arg Ser Val Lys Asn 11195	Gly Ala Glu Thr Arg 11200	Val Asp Leu 11205
Leu Cys Thr Tyr Leu Gln Pro 11210	Leu Ser Gly Pro Gly 11215	Leu Pro Ile 11220
Lys Gln Val Phe His Glu Leu 11225	Ser Gln Gln Thr His 11230	Gly Ile Thr 11235
Arg Leu Gly Pro Tyr Ser Leu 11240	Asp Lys Asp Ser Leu 11245	Tyr Leu Asn 11250
Gly Tyr Asn Glu Pro Gly Leu 11255	Asp Glu Pro Pro Thr 11260	Thr Pro Lys 11265
Pro Ala Thr Thr Phe Leu Pro 11270	Pro Leu Ser Glu Ala 11275	Thr Thr Ala 11280
Met Gly Tyr His Leu Lys Thr 11285	Leu Thr Leu Asn Phe 11290	Thr Ile Ser 11295
Asn Leu Gln Tyr Ser Pro Asp 11300	Met Gly Lys Gly Ser 11305	Ala Thr Phe 11310
Asn Ser Thr Glu Gly Val Leu 11315	Gln His Leu Leu Arg 11320	Pro Leu Phe 11325
Gln Lys Ser Ser Met Gly Pro 11330	Phe Tyr Leu Gly Cys 11335	Gln Leu Ile 11340
Ser Leu Arg Pro Glu Lys Asp 11345	Gly Ala Ala Thr Gly 11350	Val Asp Thr 11355
Thr Cys Thr Tyr His Pro Asp 11360	Pro Val Gly Pro Gly 11365	Leu Asp Ile 11370
Gln Gln Leu Tyr Trp Glu Leu 11375	Ser Gln Leu Thr His 11380	Gly Val Thr 11385

11090 11095 11100

Gln	Leu	Gly	Phe	Tyr	Val	Leu	Asp	Arg	Asp	Ser	Leu	Phe	Ile	Asn
	11390					11395					11400			
Gly	Tyr	Ala	Pro	Gln	Asn	Leu	Ser	Ile	Arg	Gly	Glu	Tyr	Gln	Ile
	11405					11410					11415			
Asn	Phe	His	Ile	Val	Asn	Trp	Asn	Leu	Ser	Asn	Pro	Asp	Pro	Thr
	11420					11425					11430			
Ser	Ser	Glu	Tyr	Ile	Thr	Leu	Leu	Arg	Asp	Ile	Gln	Asp	Lys	Val
	11435					11440					11445			
Thr	Thr	Leu	Tyr	Lys	Gly	Ser	Gln	Leu	His	Asp	Thr	Phe	Arg	Phe
	11450					11455					11460			
Cys	Leu	Val	Thr	Asn	Leu	Thr	Met	Asp	Ser	Val	Leu	Val	Thr	Val
	11465					11470					11475			
Lys	Ala	Leu	Phe	Ser	Ser	Asn	Leu	Asp	Pro	Ser	Leu	Val	Glu	Gln
	11480					11485					11490			
Val	Phe	Leu	Asp	Lys	Thr	Leu	Asn	Ala	Ser	Phe	His	Trp	Leu	Gly
	11495					11500					11505			
Ser	Thr	Tyr	Gln	Leu	Val	Asp	Ile	His	Val	Thr	Glu	Met	Glu	Ser
	11510					11515					11520			
Ser	Val	Tyr	Gln	Pro	Thr	Ser	Ser	Ser	Ser	Thr	Gln	His	Phe	Tyr
	11525					11530					11535			
Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Pro	Tyr	Ser	Gln	Asp	Lys	Ala
	11540					11545					11550			
Gln	Pro	Gly	Thr	Thr	Asn	Tyr	Gln	Arg	Asn	Lys	Arg	Asn	Ile	Glu
	11555					11560					11565			
Asp	Ala	Leu	Asn	Gln	Leu	Phe	Arg	Asn	Ser	Ser	Ile	Lys	Ser	Tyr
	11570					11575					11580			
Phe	Ser	Asp	Cys	Gln	Val	Ser	Thr	Phe	Arg	Ser	Val	Pro	Asn	Arg
	11585					11590					11595			
His	His	Thr	Gly	Val	Asp	Ser	Leu	Cys	Asn	Phe	Ser	Pro	Leu	Ala
	11600					11605					11610			
Arg	Arg	Val	Asp	Arg	Val	Ala	Ile	Tyr	Glu	Glu	Phe	Leu	Arg	Met
	11615					11620					11625			
Thr	Arg	Asn	Gly	Thr	Gln	Leu	Gln	Asn	Phe	Thr	Leu	Asp	Arg	Ser
	11630					11635					11640			
Ser	Val	Leu	Val	Asp	Gly	Tyr	Ser	Pro	Asn	Arg	Asn	Glu	Pro	Leu
	11645					11650					11655			
Thr	Gly	Asn	Ser	Asp	Leu	Pro	Phe	Trp	Ala	Val	Ile	Leu	Ile	Gly
	11660					11665					11670			
Leu	Ala	Gly	Leu	Leu	Gly	Leu	Ile	Thr	Cys	Leu	Ile	Cys	Gly	Val
	11675					11680					11685			

<400> 164

Asn Ala Thr Glu Arg Glu Leu Gln Gly Leu
35 40

<210> 165

<211> 42

<212> PRT

<213> Homo sapiens

<400> 165

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 166

<211> 42

<212> PRT

<213> Homo sapiens

<400> 166

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 167

<212> PRT

<400> 167

Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe
20 25 30

<210> 168

<212> PRT

<400> 168

Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe
20 25 30

<210> 169

<211> 42

<212> PRT

<400> 169

Asn Leu Gln Tyr Glu Val Asp Met Arg His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu

35

40

<210> 170

<211> 42

<212> PRT

<213> Homo sapiens

<400> 170

Ser	Ala	Gly	Pro	Leu	Leu	Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr
1				5					10					15	

Asn	Leu	Gln	Tyr	Glu	Glu	Asp	Met	Arg	His	Pro	Gly	Ser	Arg	Lys	Phe
		20						25					30		

Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu
	35						40		

<210> 171

<211> 42

<212> PRT

<213> Homo sapiens

<400> 171

Ala	Ala	Gly	Pro	Leu	Leu	Met	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr
1				5					10					15	

Asn	Leu	Gln	Tyr	Glu	Glu	Asp	Met	Arg	Arg	Thr	Gly	Ser	Arg	Lys	Phe
		20						25					30		

Asn	Thr	Met	Glu	Ser	Val	Leu	Gln	Gly	Leu
	35						40		

<210> 172

<211> 42

<212> PRT

<213> Homo sapiens

<400> 172

Thr	Ala	Ser	Pro	Leu	Leu	Val	Leu	Phe	Thr	Ile	Asn	Cys	Thr	Ile	Thr
1				5					10					15	

00955738 062704

Asn Thr Met Glu Ser Val Leu Gln Gly Leu
35 40

<211> 42

<212> PRT

<213> Homo sapiens

<400> 173

Asn Leu Gln Tyr Gly Glu Asp Met Gly His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 174

<211> 42

<212> PRT

<213> Homo sapiens

<400> 174

Thr Ala Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Gly Glu Asp Met Gly His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 175

<211> 42

<212> PRT

<213> Homo sapiens

<400> 175

<212> PRT

<213> Homo sapiens

<400> 178

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Arg Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 179

<211> 42

<212> PRT

<213> Homo sapiens

<400> 179

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 180

<211> 42

<212> PRT

<213> Homo sapiens

<400> 180

Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 181

0056730 00370

<212> PRT

<400> 181

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe
20 25 30

<210> 182

<211> 42

<212> PRT

<213> Homo sapiens

<400> 182

Asn Leu Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys Phe
20 25 30

<210> 183

<211> 42

<212> PRT

<213> Homo sapiens

<400> 183

Asn Leu Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu

40

<211> 42

<212> PRT

<213> Homo sapiens

<400> 184

Thr Ala Ser Pro Leu Leu Val Leu Phe Thr Ile Asn Phe Thr Ile Thr
1 5 10 15

Asn Gln Arg Tyr Glu Glu Asn Met His His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 185

<211> 42

<212> PRT

<213> Homo sapiens

<400> 185

Thr Ala Ser Pro Leu Leu Val Leu Phe Thr Ile Asn Phe Thr Ile Thr
1 5 10 15

Asn Leu Arg Tyr Glu Glu Asn Met His His Pro Gly Ser Arg Lys Phe
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu
35 40

<210> 186

<211> 42

<212> PRT

<213> Homo sapiens

<400> 186

Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr Ile Thr
1 5 10 15

<400> 192

<210> 193

<212> PRT

<400> 193

<210> 194

<211> 42

<212> PRT

<213> Homo sapiens

<400> 194

Ala Met Gly Tyr His Leu Lys Thr Leu Thr Leu Asn Phe Thr Ile Ser
1 5 10 15

Asn Leu Gln Tyr Ser Pro Asp Met Gly Lys Gly Ser Ala Thr Phe Asn
20 25 30

Ser Thr Glu Gly Val Leu Gln His Leu Leu
35 40

<210> 195

<212> PRT

<400> 195

Cys Arg Leu Ala Ser Leu Arg
20

<210> 196

<211> 23

<212> PRT

<213> Homo sapiens

<400> 196

Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
20

<210> 197

<211> 23

<212> PRT

<213> Homo sapiens

<400> 197

Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
20

<210> 198

<211> 23

<212> PRT

<400> 198

Cys Arg Leu Thr Leu Leu Arg
20

<210> 199

<211> 23

<212> PRT

<213> Homo sapiens

<400> 199

Cys Arg Leu Thr Leu Leu Arg
20

$\langle 210 \rangle$ 200

<211> 23

<212> PRT

<213> Homo sapiens

<400> 200

Cys Arg Leu Thr Ser Leu Arg
20

$\langle 210 \rangle$ 201

<211> 23

<212> PRT

<213> Homo sapiens

<400> 201

Cys Arg Leu Thr Ser Leu Arg

<210> 205

<211> 23

<212> PRT

<213> Homo sapiens

<400> 205

Leu Gly Pro Leu Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Ile Ser Leu Arg
20

<210> 206

$\langle 211 \rangle$ 23

<212> PRT

<213> Homo sapiens

<400> 206

Leu Gly Pro Leu Phe Lys Asn Ser Ser Val Asp Pro Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Ser Leu Arg
20

<210> 207

<211> 23

<212> PRT

<213> Homo sapiens

<400> 207

Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Ser Leu Arg
20

<210> 208

<211> 23

<212> PRT

<213> Homo sapiens

<400> 208

Leu Ser Pro Ile Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
20

<210> 209

<211> 23

<212> PRT

<213> Homo sapiens

<400> 209

Leu Ser Pro Leu Phe Gln Arg Ser Ser Leu Gly Ala Arg Tyr Thr Gly
1 5 10 15

Cys Arg Val Ile Ala Leu Arg
20

<210> 210

<211> 23

<212> PRT

<213> Homo sapiens

<400> 210

Leu Arg Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
20

<210> 211

<211> 23

<212> PRT

208 209 210 211

$\langle 400 \rangle$ 211

Ser Arg Leu Thr Leu Leu Arg
20

<211> 23

<213> Homo sapiens

Cys Arg Leu Thr Leu Leu Arg
20

<211> 23

<213> Homo sapiens

Cys Arg Leu Thr Leu Leu Arg
20

<211> 23

<213> Homo sapiens

<400> 214

Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly
 1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
 20

<210> 215

<211> 23

<212> PRT

<213> Homo sapiens

<400> 215

Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly
 1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
 20

<210> 216

<211> 23

<212> PRT

<213> Homo sapiens

<400> 216

Leu Arg Ser Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly
 1 5 10 15

Cys Arg Leu Thr Leu Leu Arg
 20

<210> 217

<211> 23

<212> PRT

<213> Homo sapiens

<400> 217

Leu Arg Ser Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly
 1 5 10 15

Cys Arg Leu Thr Ser Leu Arg

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<210> 218
<211> 23
<212> PRT
<213> Homo sapiens
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Leu Thr Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly
1 5 10 15

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<210> 219
<211> 23
<212> PRT
<213> Homo sapiens
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Leu Thr Pro Leu Phe Arg Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly
1 5 10 15

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<210> 220
<211> 23
<212> PRT
<213> Homo sapiens
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Leu Met Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly
1 5 10 15

<210> 221

<212> PRT

<400> 221

Gln Leu Ile Ser Leu Arg
20

<211> 58

<212> PRT

 $\langle 400 \rangle$ 222

Arg Pro Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp
20 25 30

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly
50 55

 $\langle 210 \rangle$ 223

<211> 58

<212> PRT

<213> Homo sapiens

<400> 223

Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp
20 25 30

Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr

35

40

45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly
 50 55

<210> 224

<211> 58

<212> PRT

<213> Homo sapiens

<400> 224

Pro Lys Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His
 1 5 10 15

Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp
 20 25 30

Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr
 35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly
 50 55

<210> 225

<211> 58

<212> PRT

<213> Homo sapiens

<400> 225

Pro Glu Lys Asp Gly Thr Ala Thr Gly Val Asp Ala Ile Cys Thr His
 1 5 10 15

His Pro Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu Gln Leu Tyr Trp
 20 25 30

Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly His Tyr Ala
 35 40 45

Leu Asp Asn Asp Ser Leu Phe Val Asn Gly
 50 55

<210> 226

<211> 58

<212> PRT

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 104260 002560

<213> Homo sapiens

<400> 226

Pro Glu Lys Asp Gly Glu Ala Thr Gly Val Asp Ala Ile Cys Thr His
1 5 10 15

Arg Pro Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Gln Leu Tyr Leu
20 25 30

Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly
50 55

<210> 227

<211> 58

<212> PRT

<213> Homo sapiens

<400> 227

Pro Glu Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr
1 5 10 15

His Pro Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser
35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly
50 55

<210> 228

<211> 58

<212> PRT

<213> Homo sapiens

<400> 228

Pro Glu Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr
1 5 10 15

His Pro Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Cys
20 25 30

0095730.00701

Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser
 35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly
 50 55

<210> 229

<211> 58

<212> PRT

<213> Homo sapiens

<400> 229

Pro Glu Lys Asp Gly Ala Ala Thr Arg Val Asp Ala Ala Cys Thr Tyr
 1 5 10 15

Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp
 20 25 30

Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr
 35 40 45

Leu Asp Arg Val Ser Leu Tyr Val Asn Gly
 50 55

<210> 230

<211> 58

<212> PRT

<213> Homo sapiens

<400> 230

Pro Lys Lys Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr
 1 5 10 15

Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp
 20 25 30

Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr
 35 40 45

Gln Asp Arg Asp Ser Leu Tyr Val Asn Gly
 50 55

<210> 231

<211> 58

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<213> Homo sapiens

<400> 231

Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr
35 40 45

 $\langle 210 \rangle$ 232

<211> 58

<212> PRT

<213> Homo sapiens

<400> 232

Lys Leu Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg His Ser Leu Tyr Val Asn Gly
50 55

 $\langle 210 \rangle$ 233

<211> 58

<212> PRT

<213> Homo sapiens

<400> 233

Pro Glu Lys Asp Gly Val Ala Thr Arg Val Asp Ala Ile Cys Thr His
1 5 10 15

<212> PRT

<213> Homo sapiens

<400> 236

Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His
1 5 10 15

Arg Leu Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly
50 55

<210> 237

<211> 58

<212> PRT

<213> Homo sapiens

<400> 237

Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His
1 5 10 15

Arg Val Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly
50 55

<210> 238

<211> 58

<212> PRT

<213> Homo sapiens

<400> 238

Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly
50 55

<210> 241
 <211> 58
 <212> PRT
 <213> Homo sapiens

<400> 241

Pro Glu Lys Asn Gly Ala Ala Thr Gly Met Asp Ala Ile Cys Ser His
 1 5 10 15
 Arg Leu Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp
 20 25 30
 Glu Leu Ser Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro Tyr Thr
 35 40 45
 Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly
 50 55

<210> 242
 <211> 58
 <212> PRT
 <213> Homo sapiens

<400> 242

Pro Glu Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr Leu
 1 5 10 15
 Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp
 20 25 30
 Glu Leu Ser Gln Leu Thr Asn Ser Val Thr Glu Leu Gly Pro Tyr Thr
 35 40 45
 Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly
 50 55

<210> 243
 <211> 58
 <212> PRT
 <213> Homo sapiens

<400> 243

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Pro Glu Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr Leu
1 5 10 15

Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly
50 55

<210> 244

<211> 58

<212> PRT

<213> Homo sapiens

<400> 244

Pro Glu Lys His Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His
1 5 10 15

Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly
50 55

<210> 245

<211> 58

<212> PRT

<213> Homo sapiens

<400> 245

Pro Glu Lys Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His
1 5 10 15

Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly

00065720.002704

55

<211> 58

<212> PRT

<213> Homo sapiens

<400> 246

Pro Glu Lys Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His
1 5 10 15

Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asp Gly
50 55

<210> 247

<211> 58

<212> PRT

<213> Homo sapiens

<400> 247

Pro Glu Lys Asp Lys Ala Ala Thr Arg Val Asp Ala Ile Cys Thr His
1 5 10 15

His Pro Asp Pro Gln Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp
20 25 30

Glu Leu Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr
35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asp Gly
50 55

<210> 248

<211> 58

<212> PRT

<213> Homo sapiens

<213> Homo sapiens

Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser Ile
1 5 10

<211> 12

<213> Homo sapiens

Phe Thr His Arg Thr Ser Val Pro Thr Ser Ser Thr
1 5 10

<211> 12

<213> Homo sapiens

Phe Thr His Arg Thr Ser Val Pro Thr Thr Ser Thr
1 5 10

<211> 12

<213> Homo sapiens

Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ser
1 5 10

<210> 255

<211> 12

<212> PRT

<213> Homo sapiens

<400> 255

Phe Thr His Arg Ser Ser Val Ser Thr Thr Ser Thr
1 5 10

<210> 256

<211> 12

<212> PRT

<213> Homo sapiens

<400> 256

Phe Thr His Arg Ser Ser Val Ala Pro Thr Ser Thr
1 5 10

<210> 257

<211> 12

<212> PRT

<213> Homo sapiens

<400> 257

Phe Thr His Arg Ser Ser Gly Leu Thr Thr Ser Thr
1 5 10

<210> 258

<211> 12

<212> PRT

<213> Homo sapiens

<400> 258

Phe Thr His Arg Ser Phe Gly Leu Thr Thr Ser Thr
1 5 10

255
256
257
258

<210> 259

<211> 12

<212> PRT

<213> Homo sapiens

<400> 259

Phe	Thr	His	Arg	Ser	Ser	Phe	Leu	Thr	Thr	Ser	Thr
1				5					10		

<210> 260

<211> 12

<212> PRT

<213> Homo sapiens

<400> 260

Phe	Thr	His	Arg	Asn	Phe	Val	Pro	Ile	Thr	Ser	Thr
1				5					10		

<210> 261

<211> 12

<212> PRT

<213> Homo sapiens

<400> 261

Phe	Thr	His	Arg	Ser	Ser	Val	Pro	Thr	Thr	Ser	Ile
1				5					10		

<210> 262

<211> 12

<212> PRT

<213> Homo sapiens

<400> 262

Phe	Thr	His	Gln	Ser	Ser	Val	Ser	Thr	Thr	Ser	Thr
1				5					10		

259-262

Phe Thr His Gln Ser Ser Met Thr Thr Thr Arg Thr

1 5 10

<210> 267

<211> 12

<212> PRT

<213> Homo sapiens

<400> 267

Phe Thr His Trp Ile Pro Val Pro Thr Ser Ser Thr
1 5 10

<210> 268

<211> 12

<212> PRT

<213> Homo sapiens

<400> 268

Phe Thr His Trp Ser Pro Ile Pro Thr Thr Ser Thr
1 5 10

<210> 269

<211> 12

<212> PRT

<213> Homo sapiens

<400> 269

Phe Thr His Trp Ser Ser Gly Leu Thr Thr Ser Thr
1 5 10

<210> 270

<211> 12

<212> PRT

<213> Homo sapiens

<400> 270

268 269 270

<400> 274

Phe Thr Gln Arg Ser Ser Val Pro Thr Thr Ser Thr
1 5 10

<210> 275

<211> 12

<212> PRT

<213> Homo sapiens

<400> 275

Phe Thr Gln Arg Ser Ser Val Pro Thr Thr Ser Val
1 5 10

<210> 276

<211> 12

<212> PRT

<213> Homo sapiens

<400> 276

Tyr Asn Glu Pro Gly Leu Asp Glu Pro Pro Thr Thr
1 5 10

<210> 277

<211> 12

<212> PRT

<213> Homo sapiens

<400> 277

Tyr Ala Pro Gln Asn Leu Ser Ile Arg Gly Glu Tyr
1 5 10

<210> 278

<211> 21

<212> PRT

<213> Homo sapiens

00966728.093701

<400> 278

Pro	Gly	Thr	Ser	Thr	Val	Asp	Val	Gly	Thr	Ser	Gly	Thr	Pro	Ser	Ser
1				5					10					15	

Ser	Pro	Ser	Pro	Thr
			20	

<210> 279

<211> 23

<212> PRT

<213> Homo sapiens

<400> 279

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<211> 21

<212> PRT

<213> Homo sapiens

<400> 280

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<213> Homo sapiens

<400> 281

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<211> 21

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<213> Homo sapiens

<400> 285

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Val Pro Ser Pro Thr
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<210> 286

<211> 21

<212> PRT

<213> Homo sapiens

<400> 286

Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser
1 5 10 15

Phe Pro Gly His Thr
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<210> 287

<211> 21

<212> PRT

<213> Homo sapiens

<400> 287

Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser
1 5 10 15

Leu Pro Gly His Thr
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<210> 288

<211> 21

<212> PRT

285 286 287 288

<400> 288

Leu Pro Gly His Thr
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$\langle 211 \rangle$ 21

<213> Homo sapiens

Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser
1 5 10 15

Leu Ser Gly Pro Thr
20

<210> 290

$\langle 211 \rangle$ 21

<212> PRT

<213> Homo sapiens

<400> 290

Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly Thr Pro Ala Ser
1 5 10 15

Leu Pro Gly His Thr
20

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<212> PRT

<213> Homo sapiens

<400> 291

Phe Pro Gly His Thr
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$\langle 211 \rangle$ 21

<212> PRT

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<400> 292

Leu Pro Arg Pro Ile
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<210> 293

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<400> 293

Leu Pro Glu Thr Thr
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<210> 294

$\langle 211 \rangle$ 21

<212> PRT

<213> Homo sapiens

<400> 294

Leu Pro Gly Pro Thr


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<210> 295
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<212> PRT
<213> Homo sapiens
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Pro Gly Thr Pro Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Val Ser
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Lys Pro Gly Pro Ser
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<210> 296
<211> 21
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Pro Gly Thr Pro Thr Val Tyr Leu Gly Ala Ser Lys Thr Pro Ala Ser
1 5 10 15
Ile Phe Gly Pro Ser
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<212> PRT
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Pro Lys Pro Ala Thr Thr Phe Leu Pro Pro Leu Ser Glu Ala Thr Thr
1 5 10 15

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<400> 298

<210> 299

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<212> PRT

<213> Homo sapiens

<400> 299

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Ile	Arg	Pro	Val 20	Lys	Gly	Pro	Gln	Thr 25	Ser	Thr	Ser	Pro	Ala 30	Ser	Pro
Lys	Gly	Leu 35	His	Thr	Gly	Gly	Thr 40	Lys	Arg	Met	Glu	Thr 45	Thr	Thr	Thr
Ala	Leu 50	Lys	Thr	Thr	Thr	Thr 55	Ala	Leu	Lys	Thr	Thr 60	Ser	Arg	Ala	Thr
Leu 65	Thr	Thr	Ser	Val	Tyr 70	Thr	Pro	Thr	Leu	Gly 75	Thr	Leu	Thr	Pro	Leu 80
Asn	Ala	Ser	Arg	Gln 85	Met	Ala	Ser	Thr	Ile 90	Leu	Thr	Glu	Met	Met 95	Ile
Thr	Thr	Pro	Tyr 100	Val	Phe	Pro	Asp	Val 105	Pro	Glu	Thr	Thr	Ser 110	Ser	Leu
Ala	Thr 115	Ser	Leu	Gly	Ala	Glu	Thr 120	Ser	Thr	Ala	Leu	Pro 125	Arg	Thr	Thr
Pro 130	Ser	Val	Leu	Asn	Arg	Glu 135	Ser	Glu	Thr	Thr	Ala 140	Ser	Leu	Val	Ser
Arg 145	Ser	Gly	Ala	Glu	Arg 150	Ser	Pro	Val	Ile	Gln 155	Thr	Leu	Asp	Val	Ser 160
Ser	Ser	Glu	Pro	Asp 165	Thr	Thr	Ala	Ser	Trp 170	Val	Ile	His	Pro	Ala 175	Glu
Thr	Ile	Pro	Thr 180	Val	Ser	Lys	Thr	Thr 185	Pro	Asn	Phe	Phe	His 190	Ser	Glu

Leu	Asp	Thr	Val	Ser	Ser	Thr	Ala	Thr	Ser	His	Gly	Ala	Asp	Val	Ser
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Ser	Ala	Ile	Pro	Thr	Asn	Ile	Ser	Pro	Ser	Glu	Leu	Asp	Ala	Leu	Thr
	210					215					220				
Pro	Leu	Val	Thr	Ile	Ser	Gly	Thr	Asp	Thr	Ser	Thr	Thr	Phe	Pro	Thr
225					230					235					240
Leu	Thr	Lys	Ser	Pro	His	Glu	Thr	Glu	Thr	Arg	Thr	Thr	Trp	Leu	Thr
				245					250					255	
His	Pro	Ala	Glu	Thr	Ser	Ser	Thr	Ile	Pro	Arg	Thr	Ile	Pro	Asn	Phe
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Ser	His	His	Glu	Ser	Asp	Ala	Thr	Pro	Ser	Ile	Ala	Thr	Ser	Pro	Gly
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Glu	Asp	Leu	Val	Thr	Ser	Gln	Val	Thr	Ser	Ser	Gly	Thr	Asp	Arg	Asn
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Met	Thr	Ile	Pro	Thr	Leu	Thr	Leu	Ser	Pro	Gly	Glu	Pro	Lys	Thr	Ile
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Ala	Ser	Leu	Val	Thr	His	Pro	Glu	Ala	Gln	Thr	Ser	Ser	Ala	Ile	Pro
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Thr	Ser	Thr	Ile	Ser	Pro	Ala	Val	Ser	Arg	Leu	Val	Thr	Ser	Met	Val
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Thr	Ser	Leu	Ala	Ala	Lys	Thr	Ser	Thr	Thr	Asn	Arg	Ala	Leu	Thr	Asn
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385					390					395					400
Gln	Thr	Ser	Pro	Thr	Val	Pro	Trp	Thr	Thr	Ser	Ile	Phe	Phe	His	Ser
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Lys	Ser	Asp	Thr	Thr	Pro	Ser	Met	Thr	Thr	Ser	His	Gly	Ala	Glu	Ser
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Ser	Ser	Ala	Val	Pro	Thr	Pro	Thr	Val	Ser	Thr	Glu	Val	Pro	Gly	Val
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Val	Thr	Pro	Leu	Val	Thr	Ser	Ser	Arg	Ala	Val	Ile	Ser	Thr	Thr	Ile
						455					460				
Pro	Ile	Leu	Thr	Leu	Ser	Pro	Gly	Glu	Pro	Glu	Thr	Thr	Pro	Ser	Met
465					470					475					480
Ala	Thr	Ser	His	Gly	Glu	Glu	Ala	Ser	Ser	Ala	Ile	Pro	Thr	Pro	Thr
				485					490					495	
Val	Ser	Pro	Gly	Val	Pro	Gly	Val	Val	Thr	Ser	Leu	Val	Thr	Ser	Ser

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Arg	Ala	Val	Thr	Ser	Thr	Thr	Ile	Pro	Ile	Leu	Thr	Phe	Ser	Leu	Gly				
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Glu	Pro	Glu	Thr	Thr	Pro	Ser	Met	Ala	Thr	Ser	His	Gly	Thr	Glu	Ala				
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Val	Pro	Gly	Val	Val	Thr	Ser	Leu	Val	Thr	Ser	Ser	Ser	Gly	Val	Asn				
	610					615					620								
Ser	Thr	Ser	Ile	Pro	Thr	Leu	Ile	Leu	Ser	Pro	Gly	Glu	Leu	Glu	Thr				
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Thr	Pro	Ser	Met	Ala	Thr	Ser	His	Gly	Ala	Glu	Ala	Ser	Ser	Ala	Val				
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Pro	Thr	Pro	Thr	Val	Ser	Pro	Gly	Val	Ser	Gly	Val	Val	Thr	Pro	Leu				
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Val	Thr	Ser	Ser	Arg	Ala	Val	Thr	Ser	Thr	Thr	Ile	Pro	Ile	Leu	Thr				
		675					680					685							
Leu	Ser	Ser	Ser	Glu	Pro	Glu	Thr	Thr	Pro	Ser	Met	Ala	Thr	Ser	His				
	690					695					700								
Gly	Val	Glu	Ala	Ser	Ser	Ala	Val	Leu	Thr	Val	Ser	Pro	Glu	Val	Pro				
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Gly	Met	Val	Thr	Ser	Leu	Val	Thr	Ser	Ser	Arg	Ala	Val	Thr	Ser	Thr				
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	770					775					780								
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Leu	Thr	Leu	Ser	Ser	Gly	Glu	Pro	Glu	Thr	Thr	Thr	Ser	Phe	Ile	Thr	
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Arg His His Thr Gly Val Asp Ser Leu Cys Asn Phe Ser Pro Leu Ala
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Arg Arg Val Asp Arg Val Ala Ile Tyr Glu Glu Phe Leu Arg Met Thr
 180 185 190

Arg Asn Gly Thr Gln Leu Gln Asn Phe Thr Leu Asp Arg Ser Ser Val
 195 200 205

Leu Val Asp Gly Tyr Ser Pro Asn Arg Asn Glu Pro Leu Thr Gly Asn
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Ser Asp Leu Pro Phe Trp Ala Val Ile Leu Ile Gly Leu Ala Gly Leu
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Leu Gly Leu Ile Thr Cys Leu Ile Cys Gly Val Leu Val Thr Thr Arg
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